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Fall 2013



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"Check it out,
there is some
good stuff in
this issue!"

—bird

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USAGE

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or email to Business@tabtale.com



Letter from the Director



feel our industry is approaching another milestone. We have passed our infancy and the rough road of teenage years. Gone are the days of this letter containing hopes and dreams that one day casual games will become mass-market entertainment.

It is safe to say that casual games are now the iconic image of mass-market digital entertainment.

With success all around us, sometimes it is nice to realize that the path to long-lived success is never a straight line. Companies now iconic have at times struggled with their own demons, financial instability and just plain bad luck. Like Rovio, it might take you years and dozens of games before your game characters are on seemingly every single lunch box, hoody sweatshirt and Halloween costume!

One of the first companies to gaze off into the murky distance with us and see what we were seeing was King. I bring this up now, some ten years hence, as the press is reporting that King is preparing to go IPO. Some project King's offering could fetch up to \$5 Billion. That's Billion, with a B.

I hear and see much focus on King's good work, its team's ability to take what it learned in one area of the business (skill games) and successfully apply it to another (social/Facebook/mobile).

I encourage you to take a different focus and while listening to the conference lectures and reading the contents of this magazine concentrate applying newly learned concepts to achieve your next success. Your great success might be just around the bend and the reward will be worth the wait.

Jenica

Jessica Tams, *Director of the Casual Games Association*
jessica@casualconnect.org

EVENT CALENDAR

23-25 October 2013
Casual Connect Kyiv

RUS Hotel
4 Hospitalna St.
Kyiv, 01601
Ukraine



11-13 February 2014
Casual Connect Europe in Amsterdam

Beurs Van Berlage
Damrak 243, 1012 ZJ
Amsterdam, Netherlands



May 2014
Casual Connect Asia

Shangri-La Hotel
22 Orange Grove Road
258350, Singapore



July 2014
Casual Connect San Francisco

Hilton San Francisco
Union Square
333 O'Farrell St.,
San Francisco, CA 94102



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Adam Lieb is the founder & CEO of Duxter. Duxter builds social tools for game developers to engage their fans and for gamers to live the gamer life. Adam has spent fifteen years in the industry building websites and tools for gamers and game developers. He sold his first gaming website when he was twelve and made his first million dollar business by the time he was twenty.

Seattle, WA



Tom Swanson

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Tom Swanson is a Seattle-based marketer currently working at Razorfish. He spends his spare time helping independent game developers and small eSports companies with their marketing challenges. He has a website that houses a blog and weekly podcast based around business and growth in the eSports scene.

Seattle, WA



Tadhg Kelly

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Tadhg Kelly is a senior video game designer, producer and creative director. Tadhg has held roles at various video game development, technology and publishing companies. Since the early '90s, Tadhg has worked on all sorts of game projects, from board games and live action roleplaying games through to multi-million dollar PC projects.

Seattle, WA

Robots & Pencils
Calgary, Canada



Supergiant Games
San Francisco, CA



Venabyte
Riverside, CA



Gameloft
New York, NY

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Frank Delise is currently the Director of Game Solutions at Autodesk. He has a rich history in the gaming industry, and before coming to Autodesk, he founded Kaos Studios at THQ and led the DICE team as the General Manager.

San Francisco, CA



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Nicholas is currently an American Studies PhD candidate (ABD) at the University of Iowa. His professional and academic interests are Early US History, Contemporary Popular Culture, and the Industries of Popular Entertainment - specifically, comic books, movies & video games.

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Tim Doolen is the Art Director at Muse Games in New York City. He graduated with a BFA from the School of Visual Arts where he trained in film and visual effects.

New York, NY



About the Cover



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Michelle Tran is a data scientist at Priori Data GmbH, a mobile app data company based in Berlin. She has previously worked in economic consulting.

Berlin, Germany

Krešimir Špes

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Krešimir formed Cateia Games studio along with two colleagues in the year 2000. The studio has since developed over 20 games and became one of the leading casual developers in the region. At Cateia Games Krešimir works as a lead programmer, coordinating a team of highly skilled developers and external partners.

Zagreb, Croatia



Present Creative

Present Creative is a San Francisco-based, full-service game development studio with a focus on quality art. The team integrates illustrative expertise with a solid knowledge of how games are built. Co-founded in 2001 by Zachary Present and Ben Sutherland, Present Creative has a long history of producing high quality artwork for game companies such as EA, PopCap, PlayFirst, Zynga, Microsoft Disney, and GREE.

This cover illustration represents the atmosphere and workflow of our studio while showcasing the variety of art styles and concepts that exist in today's casual and social games. The cover was designed by eight different Present Creative artists and reflects the overall versatility of the studio. The ability of our artists to seamlessly move between many different styles and applications is instrumental to the studio's continued success in the ever-changing casual and social games market.

Contributing artists:

Aletta Wenas, Zachary Present, Hector Ortiz, Joshua Clements, James Larson, Phil Jaeger, Angela Vanden Tak, and Jonathan Stagnaro.



KIXEYE Australia

Brisbane, Australia

By the Numbers

Defining the Relevant Market for Your App

In this article we explore how mobile app publishers can understand demand and opportunities for growth in the niche market specific to each of their apps.

STEP ONE:

Define the Relevant Market

When evaluating the profit opportunity for an app, developers might ask themselves the following questions: How is demand for apps like mine growing? How do I identify where people are downloading and playing the specific kind of games I am creating? Who are my competitors? Am I good enough to beat them?

Answering these questions is precisely the goal of market definition—narrowing the universe of apps down to your direct competitors and observing trends within this subset to make informed business decisions.

At Priori, we rely on an extensive set of sub-categories based on the core functionality or theme of apps in order to help our developer clients arrive at relevant market definitions for their apps. This classification system can provide an additional level of detail to the native app store categories. For example, over 20,000 apps in the Apple App Store were assigned to the native category “Puzzle Games” as of August, 2013. These same apps map to over 330 Priori Sub-Categories, from “Arcade Ball Games” to “Zombie Games.” For any given app, defining the relevant market can reveal interesting trends not easily visible at the app store or native category level.

STEP TWO:

Focus on the Trends that Matter

To illustrate how market definition can be useful, let's use an example from our dataset. We'll be exploring the Priori Sub-Category “Sudoku” on the iOS platform (iPhone and iPad combined). Here are some key statistics:

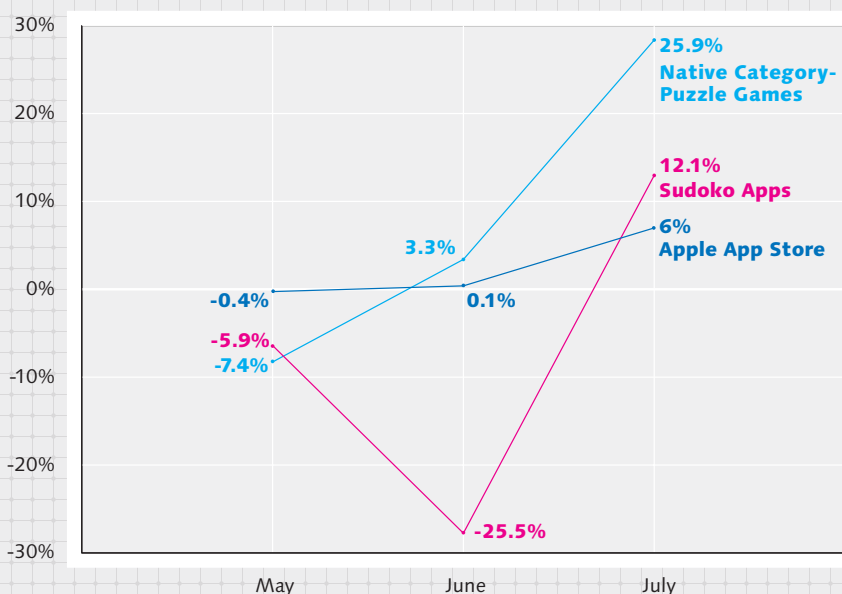
- As of August 11, 2013, we counted 1,609 apps, 929 publishers, 5M monthly downloads and 37M active users in this sub-category.
- This makes Sudoku the 85th largest sub-category in terms of global in-month downloads, the 157th largest in terms of number of apps, 72nd in terms of number of active users and 183rd in terms of number of publishers.

In *Graph 1* we've plotted the month-over-month global download growth (May-July 2013) for the Sudoku sub-category alongside the native category Puzzle Games and the overall Apple App Store. In the graph we can see that in June 2013, global in-month installs of Sudoku apps decreased relative

to the prior month, while installs in the App Store as well as the overall native category comprising Sudoku grew. In July, however, monthly installs of Sudoku apps grew at a positive rate. In terms of month-over-month download growth, Sudoku apps outperformed the App Store but underperformed relative to the native category Puzzle Games in July 2013.

An individual Sudoku app developer could also plot his individual app's performance on the above graph to benchmark against his direct competitors and the larger market. This exercise proves useful not only in internal evaluations of an app's viability, but also when having to prove the market opportunity for an app (or to defend an app's performance relative to that market) to investors.

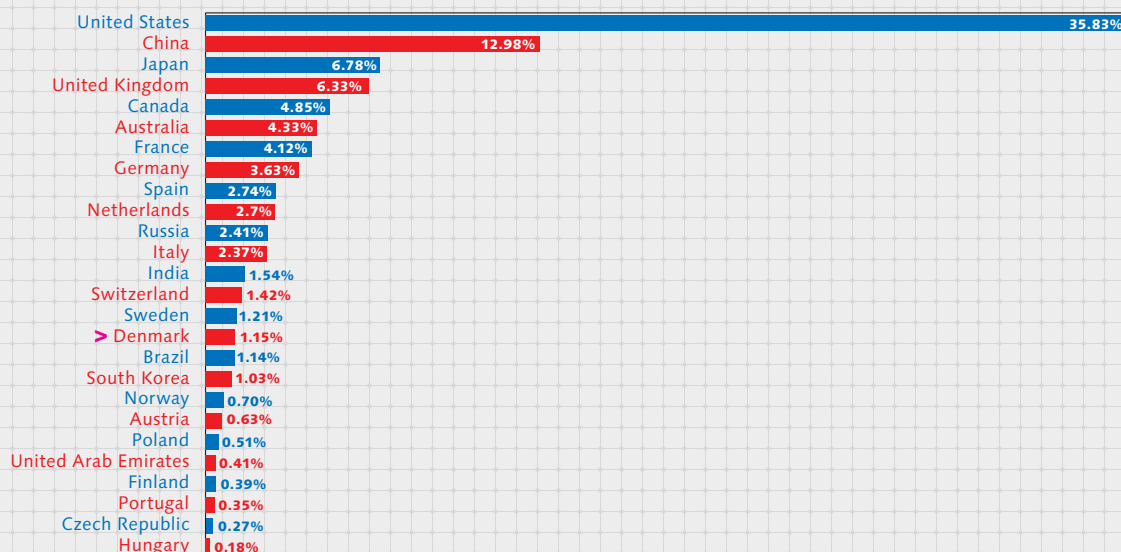
GRAPH 1: Global Month-Over-Month Download Growth on iOS Platform



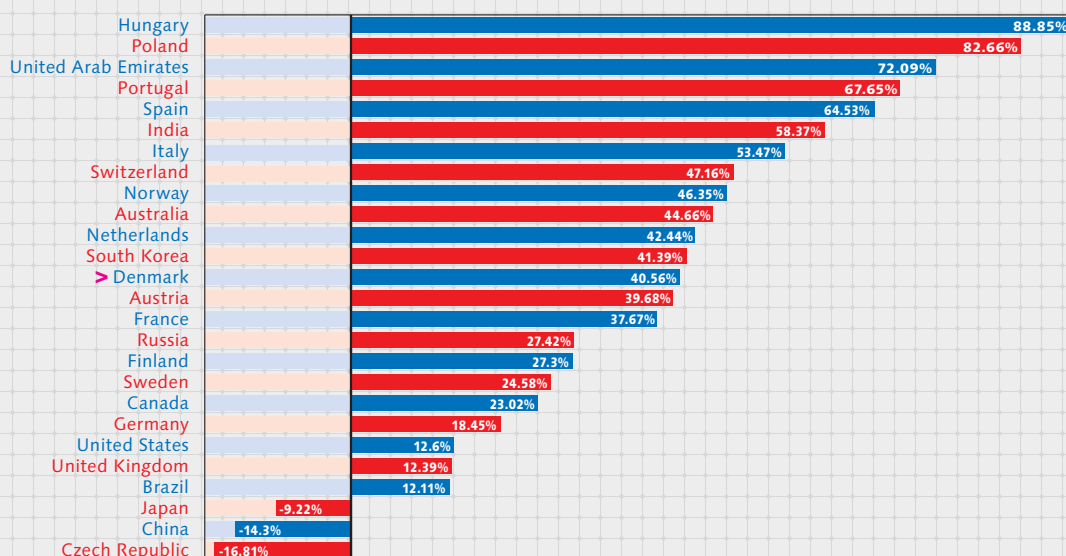
Data for iOS. Sudoku Apps comprises apps classified under Priori Sub-Category “Sudoku”.



GRAPH 2: Share of Sudoku Sub-Category Downloads by Country on iOS Platform (July 2013)



GRAPH 3: Sudoku Sub-Category Download Growth by Country on iOS Platform (June-July 2013)



STEP THREE:

Examine Geographical Variations

We've seen how downloads have grown at the global level, but it is also interesting to explore how Sudoku apps have performed in different regions across the globe. Let's explore three different visualizations of the monthly down-

loads metric that illustrate the geographical variation within this market.

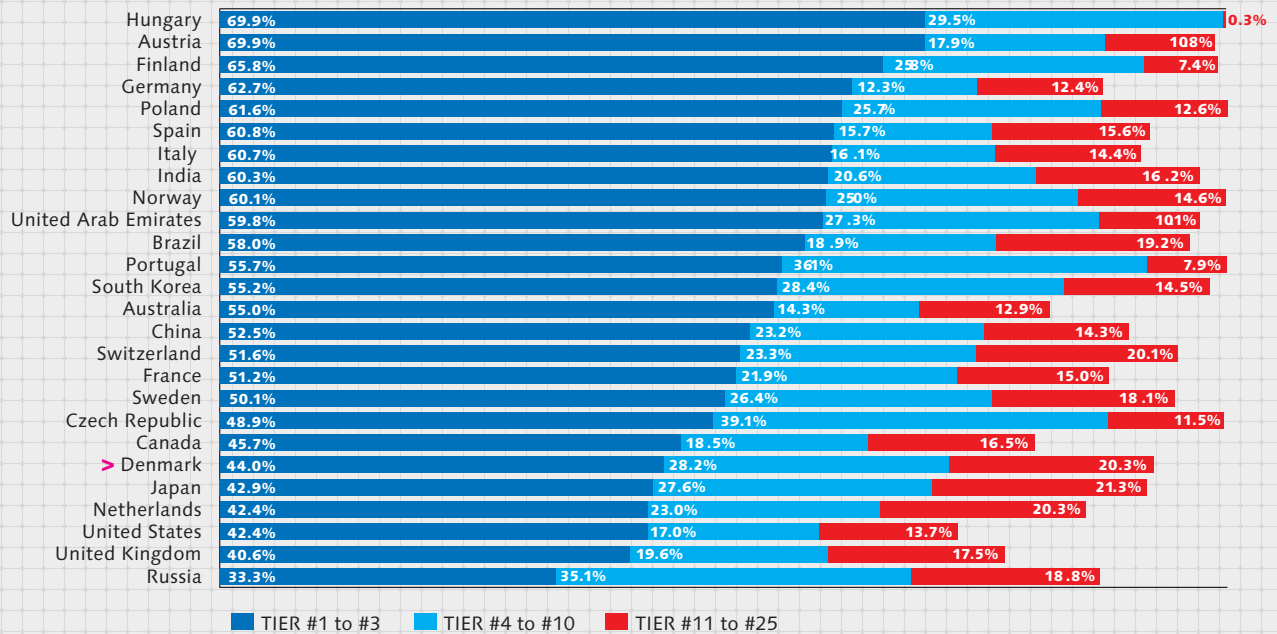
- **A relevant market definition is essential to calculating market share—Graph 2**—shows how monthly downloads (roughly 5M total) were distributed among the different countries we track. Each

country's in-month downloads as a share of global downloads is displayed. This metric serves as a proxy for share of global demand within the Sudoku sub-category.

- **A relevant market definition is essential to identifying growth opportunities—Graph 3**—shows how monthly installs

Defining the Relevant Market for Your App

GRAPH 4: Sudoku Sub-Category Downloads Distribution by Country on iOS Platform (July 2013)



grew between June and July in the various countries. This statistic provides insight into which geographic regions are exhibiting positive or negative demand growth.

- **A relevant market definition is essential to assessing the competitive landscape—Graph 4**—provides insight as to how the market for Sudoku apps is structured within each country by showing how in-month downloads are distributed. We segment Sudoku apps into three tiers:

- Tier 1: The top three most downloaded apps
- Tier 2: Apps four through 10 (based on downloaded volume)
- Tier 3: Apps 11 through 25 (based on download volume)

Often, when observing the top local players in a given market, there are three that stand out in terms of download volume. And in most cases, the vast majority of sub-category downloads are represented by the top 25 apps.

Putting the Data to Use

Let's take the example of a Sudoku app developer looking to evaluate the market opportunity

in **Denmark**. Denmark is a small country, but it places among the top 10 countries in the world in terms of smartphone penetration¹, so it might be interesting to explore further. What can downloads, as presented in the previous three graphs, tell us about the market for Sudoku apps in Denmark? What questions can this data help us answer?

- **Is the market large enough to justify my entry in the first place?** The Danish market is small, representing a little over 1% of global sub-category downloads, or around 58,000 downloads per month. (Graph 2)
- **Are the market dynamics in my favor?** Sudoku downloads are growing, and fast. Monthly installs grew by over 40% from June to July. (Graph 3)
- **How are my biggest competitors doing, and how many downloads can my app stand to gain?** Comparing the structure of the Sudoku apps market in Denmark to the other countries we track, we see that the top three players command relatively less of the overall market than in other countries. This indicates that Danish users are

relatively less concentrated among a few brands. Furthermore, we see that apps that manage to break into the top 25 can expect larger, more evenly spread gains than those same positions in other geographic markets (apps four through 25 command a total of 49% of the market, the fourth highest such figure in our graph. (Graph 4)

Conclusion

In an industry as fragmented and immature as the mobile app industry, a relevant market definition can go a long way. Having a holistic view of the market your app occupies is essential to measuring market share, gauging the health of your app's segment, and even developing an expansion strategy. Quite simply, a good market definition allows developers to compare apps and app markets on an apples-to-apples basis. If you can only see your biggest competitors then you can only say how you size up to them. If you can see all of your competitors, even at the aggregate level, then you know how your app fits into the overall market. This is instrumental both to managing your app's success and to demonstrating its potential and value to investors. ✱

¹ <http://mashable.com/2013/08/27/global-smartphone-penetration/>

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A Picture Is Worth a Thousand Words

The Art of *Guns of Icarus Online*

In 2009, a sketch of a Gatling gun scrawled on a napkin began circulating within the Muse Games studio. Eventually the sketch became the foundation behind the design of a turret based shooting and time-management game. The title, *Guns of Icarus*, was released five months after its conception and performed well enough to garner acclaim and notoriety. It was our first game and the first commercial success of our studio.

Months after its release, we still felt the idea behind *Guns of Icarus* was harboring untapped potential. We discussed ideas concerning new game-play or art on a regular basis. Soon the entire studio was whispering about the possibility

of a follow-up title. Three years later, after separating with a potential publisher, resetting art styles, and making countless reformatations to the game-play, we released *Guns of Icarus Online*.

Our journey was exciting and challenging. We had our successes and our pitfalls along the way. As a young and inexperienced team venturing into what would be, for most of us, our freshmen title, we braced ourselves for the road ahead and jumped into the unknown.



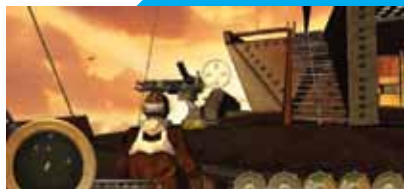


by Tim Doolen;
Art Director, Muse Games;
New York, NY

Setup, Look and Feel

The design goal for *Guns of Icarus Online* was simple: to expand the original *Guns of Icarus*. Players would now have the ability to choose and customize their avatars. They could select from various ships and equipment with a variety of unique and devastating weapons. Captains could pilot their own ships and combat rival captains in a number of unique locations set in the remnants of a war-torn world. Our job was to ensure faithful transmission and evolution of the old style introduced in the earlier game.

Some of our first discussions regarding *Guns of Icarus Online* revolved around how we were going to capture the feel of the game in a graphical style. We focused on our themes of invention and rediscovery and wondered what type of film or photo technology would exist in our steampunk world. Turn-of-the-century film and video technology sparked our imaginations, and we began to pursue the look of the earliest film technology.



The predecessor to *Guns of Icarus Online*, *Guns of Icarus*.

What Went Right

Using a method similar to the way gradient maps work in Photoshop, we were able to take the black-and-white value of a color and tint it or completely replace it with another hue. Using this method we simulated the look of chemical breakdown in old color photography. These different color arrangements established the identity of each level.

To supplement the coloring of early cinema, we were also able to contribute some of the artifacts of film. We added dust and scratches to give a grungy and nostalgic look, and to communicate death, we used a procedural red burn on the edges of the screen to imitate overexposed film near the end of its roll. The result became an almost subconscious effect that added style and supported the game's theme.

What Went Wrong

Despite the contributions made to the game's look, the style effects that harkened back to the earliest days of film were some of the first features that new players turned off when they first started playing the game. The color adjustments tended to marry the colors of the screen together and reduce contrast. Normally this would be an aesthetic benefit for any work of art, but players began having trouble distinguishing enemy ships from the environments. Ordinarily, developers draw attention to interactive objects by making them high contrast and high saturation, but without that contrast and saturation in our game they became lost, and game-play ultimately suffered. The answer to this problem was that we kept the option to use the post-process effects, but also allowed players to turn them off to allow for a better game-play experience.



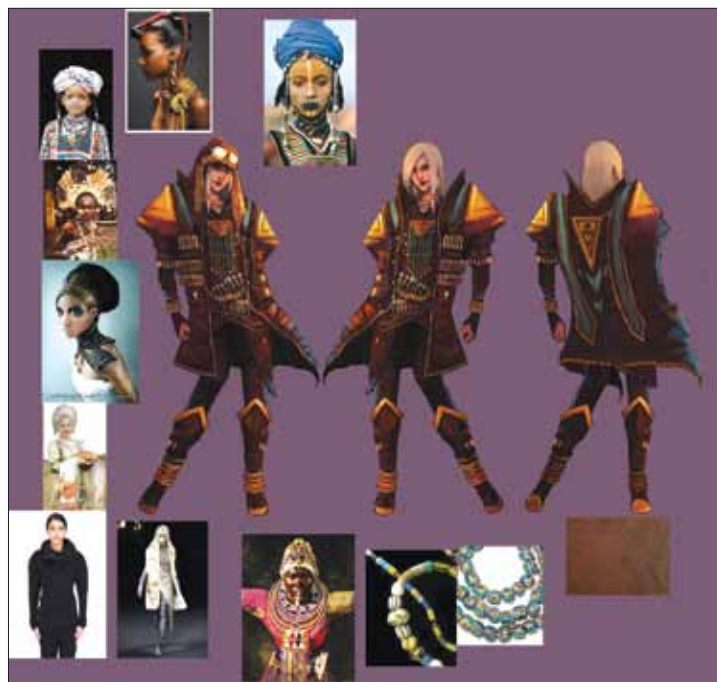
Color tests used to achieve the look of decaying film.

The Art of *Guns of Icarus Online*

Designing the Characters

Our team considered a variety of approaches when deciding on a style. We considered a realistic approach as well as the simplistic elegance of *Team Fortress 2*. The character's body also had to have an attractive quality as it would be mostly a frame for the variety of costumes we were designing. We liked the idea of creating something different and unique, perhaps challenging the audience's expectation for what a protagonist should look like in games like ours. We resisted the impulse to make our characters idealized, muscle-bound comic book heroes—so much so that we considered creating ultra-thin designs that looked like the artwork of Peter Chung or the character Jack Skellington from *The Nightmare before Christmas*. Ultimately we settled on something close to the sleek physique of a fashion model. This frame would complement the design of our outfits and ensure that the silhouette would be readable and interesting from across the ship.

Our first battle in designing costumes turned out to be the most basic aesthetics behind steampunk. We continuously returned to the common tropes of goggles, overly elaborate organizations of gears, and girdles. Escaping from this accepted and clichéd view of steampunk meant an imagined cultural reaction to the genre. And through this historical and cultural approach, we found that new ideas began to synthesize and combine with old assumptions. Taking stylistic chances and experimenting, we gave depth and originality to a predictable genre.



A cultural approach to steampunk.



What Went Right

The character costume selection ended up being as large and varied as we hoped. Our entire art team took design responsibilities and contributed to the costume designs. To implement a high volume of designs we looked outside our immediate ranks and outsourced the labor-intensive task of creating costumes to a number of talented individuals. Our core design team would compose a front-and-back design view together with reference and material guides to communicate the intended final product. They delivered, and we were able to complete our goals in offering players a wide selection of styles and themes.

What Went Wrong

Though we made vast improvements over the original player character, there were aspects of our character development that could have been stronger.

During *Guns of Icarus Online*'s conception, we decided to divide the ship's crew duties by implementing a class-based system. The design called for Captains (which later became Pilots), Gunners, and Engineers. We tried to make these classes visually distinct based on their silhouettes. Captains were thin with tight, form-fitting clothing. Gunners were unkempt, asymmetrical types with repeating triangular sub-shapes. Engineers were bulky and wide, covered with tools and grease, with the most rotund silhouettes.

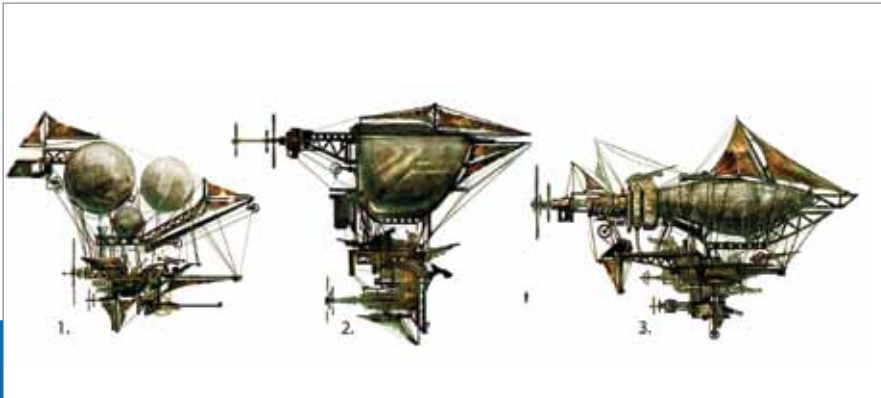
The visual distinctions between classes lost much of the intended design, however,

once our assets became finalized. I attribute this to insufficient communications with our multiple outsourcers. Communicating the shape and guiding principles behind the overall characters became a lower priority than nailing the art style and being faithful to the concept work. Critiques on work-in-progress were usually dedicated to how the individual parts could be improved rather than the overall form or how close the work matched our design pillars. And because we did not adhere to our own style guides, the result became a weaker association between class and costume style.

The takeaway was to establish our goals and communicate them as having paramount importance. Getting caught up in small details was a distracting and costly detour.

Ship Building

While avatars allowed players to project themselves onto another person and experience the world through familiar eyes, the real characters of our game were the ships: massive flying dirigibles with extensive firepower and an orchestra of pulsing machinery.



Triangular warship concepts.



What Went Right

We were able to achieve far more variation in the design of the ships than the characters. Because we were dealing with fantastical machines, we approached their creation with a greater degree of freedom. The result was a wide variety of rhythm and form. Each of our ships had its own unique personality, and the ships were immediately recognizable in their silhouette from far away.

The ships also looked great from a player's perspective. We used a tiling texture technique to ensure enough resolution over the full surface of these hulking machines. Using this technique, we were able to texture entire ships using only two texture maps.

Additionally, we generated a second UV set for these textures that allowed us to overlay ambient occlusion and subtle color variations. Combined into one shader, these two UV sets helped us to create highly detailed ships in an efficient manner. Both guns and engines were handled using this technique.

What Went Wrong

We used little to no prototyping iterations to create the ships themselves. When we first boarded the ships, it was usually a finalized asset that had been fully modeled and textured. Any changes to design required that we create multiple versions of the same ships with different deck and gun configurations. This meant artists had to go back and refine finalized details repeatedly before we arrived at a ship design we felt was balanced and complete.

The positive attribute of this mistake was that we learned from our errors. The more ships we created, the more developed the process became. We now regularly test basic deck collision layouts for flow and ease of use before we commit to modeling anything that resembles a ship. Our technique and results improve with every new ship.

The Art of *Guns of Icarus Online*

World Construction

The world needed to look as breathtaking and inspiring as our ships. We wanted players to explore distinct and unique regions of the war-torn world and through visual cues participate in the story of *Guns of Icarus Online*.



The construction of an ancient city.



What Went Right:

We accomplished a set of diverse environments, each immediately identifiable through color and unique landmarks. Goliath ships and relics from the past decay in the background and serve as obstacles for pilots to maneuver through, adding interest and dynamism to each experience.

The clouds are one of our greatest visual achievements inside the levels. They add to game-play and make the levels look as panoramic as we hoped. Creating them and maintaining a playable frame-rate is an impressive technical achievement to say the least. To build them, we projected textured cloud images onto dense mesh sheets. We then rendered these points using vertex-based lighting to achieve an illusion of volume. An added level of polish was then applied using the ambient light of the skybox to color the clouds and blend them into the environment.

We also had a variety of graphical methods to enhance each level's look and to make the areas feel massive. A basic visual tool we used to communicate depth is the way ambient light scatters as it recedes into the horizon. To imitate this property of the sky, our environmental fog is derived from the colors of our skybox rather than a single hue that often mismatches with the edge of the environment.

Additionally, because our time of day is fixed in levels, we are able to light-map each level and remove the need for a static and costly directional light. The resulting environments look good and convey scale effectively, and through good technical design, they render cheaply.

A quality control check inside the game.



Vertex based lighting gives the clouds the illusion of volume.

What Went Wrong:

As good as the levels look, they are still missing some aspects that would allow them to be truly breathtaking. Our texturing of terrain relies on an elevation-based shader that projects different textures at different elevations. It's a quick way to get results, but the lack of variation keeps the terrain from looking interesting. We also lack normal and specular information, which keeps our visual depiction just short of believable. Furthermore, support of unique shaders, such as water and ice, would further enhance the feeling that players have traveled to a new and exotic region.



Conclusion

It's been months since our release and we've been fortunate to have the encouragement of a continuously growing and supportive player base. Our young team has matured and learned invaluable techniques along the way. We've all grown and become better equipped to face the new challenges that lie ahead of us. We've learned to establish our goals and to refer to them continually to make sure the development of the project is moving along the right path. Communication and support between different members of our team are the keys to achieving our goals. *Guns of Icarus Online* has been a demanding and rewarding journey, and we are very proud of how the game turned out. ❄

Indie Corner

No Limitations

Interview with Jon Hales of Venabyte

Jon Hales was working as a developer at 3DO Studios in 2006 when a fluke dirt bike accident left him paralyzed below the collarbone. Undaunted, Jon has since formed Venabyte, a one-man development studio which recently released its first title, BLIZZ Words. "I don't really consider myself disabled," he says. "You have absolutely no limitations except those that you create for yourself."

Jon is clearly our kind of guy.... —ed.

When did you first become interested in making games? Were there any games that captured your imagination as a child?

The first videogames I played were on the Atari 2600 my father brought home with our very first color TV. I was in early grade school. *Pong*, *Adventure*, *Combat*—I enjoyed them all. I got my first taste of programming with a TRS-80 Model II and III. The first computer games I played were *Decathalon*, *Lunar Lander*, and *Deathmaze 2000* in all their black-and-white, blocky glory. I was eight, and I spent hours trying to craft an adventure game in basic, reading code books and trying to grasp the programming syntax. Later, I made an adventure game for my family on our IBM compatible Tandy 2000, complete with pictures created with draw and paint coordinates. I remember being so excited about it I literally led my parents through the correct pathway to the ending sequence, choice by choice. I couldn't help myself.

There were some signature games that influenced me tremendously as a child and deep-seated my affinity for games. I know many will identify with me when I single out favorite games I enjoyed on my Apple IIc: *Bard's Tale*, *Wizardry*, *Wasteland*, *Might & Magic*, and the incredible *Ultima* series. I enjoyed all action games as well, but RPGs have always been my soft spot.



How did you get into the business? What was your early work experience like?

Even though I really enjoyed both games and art, I never considered a serious career in the industry. I struggled with math and felt I couldn't grasp programming concepts, so through high school and college, I never considered it an option at all. While I finished out a four-year degree at Brigham Young University, I volunteered my time at their Media Arts Lab so I could play with the video editing systems, including Avid, and extensive software libraries. I walked myself through the Adobe products, and spent time with available 3D modeling on both 3D Studio 4/Max and Alias Wavefront systems. There were no classes; everything was self-taught. I did this while holding down a full school schedule and a full-time job as a local waiter.

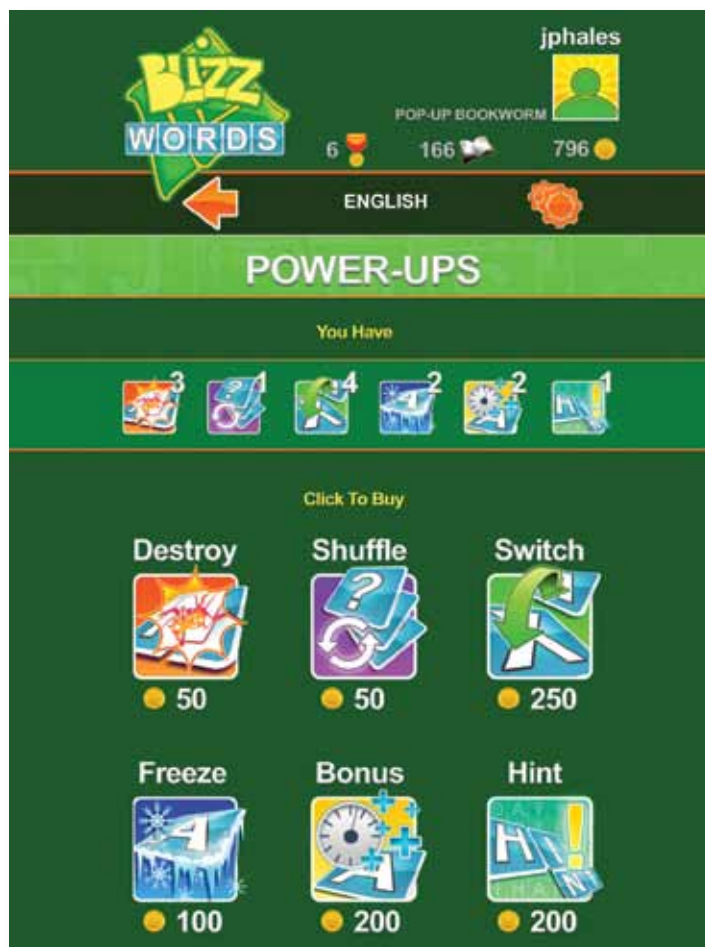


I learned enough to work for KBYU student broadcast, and do FX work for a local private film studio. I thought I wanted to work in visual effects for film, but when I received an offer at 3DO in Redwood City, California I jumped at the chance to work in games and move back to my home state.

My early work experience was fantastic. I was lucky enough to be part of a team that truly understood the importance of gameplay. Under the direction of Keith Bullen and Walter Ianneo we created the *Armymen3D* series for PlayStation. We were pioneers of utilizing cover in third-person firefighting gameplay instead of simple run-n-gun. They taught me that more than visuals, story, or anything else, if a game isn't fun to play, it isn't worth making. Their invaluable insight on finding an enjoyable gameplay mechanic first and foremost has stuck with me till today. I think that concept is especially important in



Jonathan Hales;
Founder, Venabyte;
Riverside, CA



MASSIVE BOARD
BLIZZ Words has a huge 80-tile board. Because it's so large, a typical board has large words that start from just about every tile. This means it is easier for children to find words and fun and challenging for adults to find the best words.

DYNAMIC BOARD
When you find words, tiles disappear from the board, remaining tiles cascade, and new tiles are introduced,

automatically forming new word combinations.

BOARD CONTROL

There are six power-ups you can earn or purchase to manipulate the board. This helps you score better in challenges and in head-to-head mode, and it is critical for collections.

WORD COLLECTIONS

As you build your library, you automatically discover word collections. Collections are groups of words with a theme. As you fill and complete collections you earn badges.

Are you a one-man show? Do you draw and program the games by yourself, or do you outsource some of the labor to other designers?

Great question! All the design, art, music, and programming of *BLIZZ Words* I did entirely by myself over the course of many months with my right pinky. The websites, the *BLIZZ* video on the website—all me. I'm a little bit of a self-taught HTML, PHP, MySQL, Javascript hack as well. I'm not shy about my shortcomings. Real software engineers would undoubtedly laugh themselves silly with a quick glance at my code. But, I do get things done, and I like to think that counts for something.

In full disclosure, I did incorporate plugins from two different companies, but I needed to program extensively to implement them.

I wish I had a really cool back-story here. Boredom? (Big smile) Seriously though, I had just finished illustrating an interactive children's book (another story) and was taking Thanksgiving week off in Lake Arrowhead with my fam-

ily. I had nothing on my plate and was dying to try and create an app on my own. I had a lot of ideas but I knew they were too grand to tackle by myself. I certainly didn't want to bite off more than I could chew. So I knew it had to be simple, and I knew it needed to be something my family would enjoy. Boggle happened to be a game my extended family enjoys so I thought a word search game would be a good place to start. Three weeks later I had a working prototype. When my family couldn't put it down on Christmas break I knew I had to finish it.

There are a lot of word and spelling games. How do you think BLIZZ Words differentiates itself from the rest?

There certainly are! A lot more than I thought there were when I first started out. Though I'm not familiar with all the word games out there, here are a few key play elements that differentiate us from others:

the casual games arena where decisions on whether to play or share a game are made within seconds of installing and running it.

What was your reason for establishing Venabyte?

We established Venabyte as a vehicle to deliver wholesome entertainment to the casual market. There is a broad spectrum of tastes for both the creators and consumers of media in any market. Venabyte would like to cater to discerning gamers, families, and parents with experiences they can feel completely comfortable with. We believe in creating safe, uplifting, and positive gaming experiences enjoyed in moderation. This is important for us because we believe media can be an influential tool. Simply put, we want to be a positive, uplifting influence.

What was the inspiration for BLIZZ Words?

Interview with Jon Hales of Venabyte

Tell us more about that right pinky. Given that your injury has impaired your ability to fully use your hands, how do you approach coding? Do you use a standard keyboard or do you rely on other devices?

I have used speech recognition technology since my injury. Emails, messaging, and writing can be accomplished fairly decently. But *Dragon Naturally Speaking*, *Google Voice*, and Apple's equivalent are worthless for programming.

Consequently, I rely entirely on the middle knuckle of my right hand to code. I hen-peck my keyboard with my suspended pinky knuckle by moving my shoulder and elbow. After a couple of hours of this, my shoulder burns pretty badly so I try to rest it often.

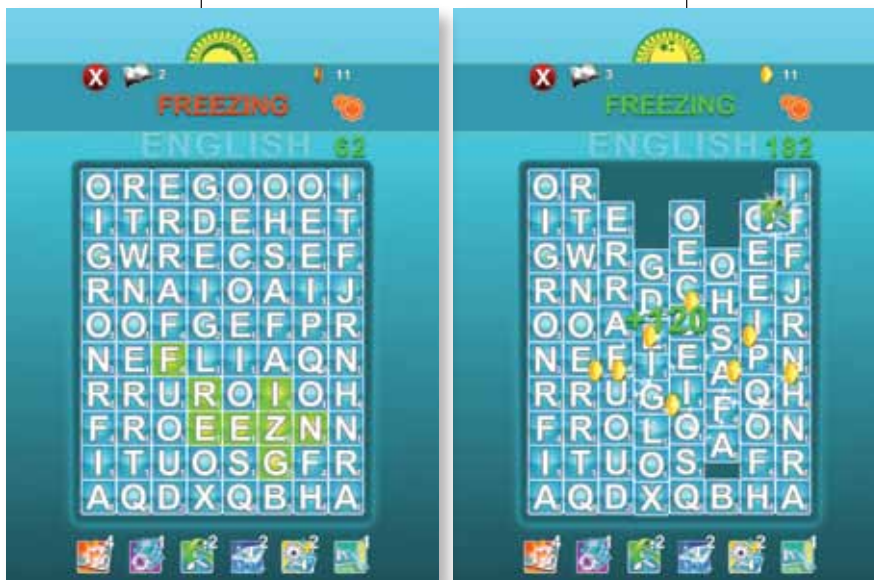
My mouse is a touch-pad. I use a laptop touch pad or a wireless Logitech pad purchased for my Apple. I also have a large Wacom tablet for occasional painting. I can stick my pen into a glove and draw using broad shoulder/elbow movements.

Also, could you take a moment to discuss how you get feedback on the games you make?

I have four daughters, so you might say I have an in-house test group! My wife does not game at all—we balance each other out really well. However, my girls and extended family and friends have been more than happy to play my pre-release versions and give me feedback on what they think. This is a great strategy for indie developers who have low to no budget. It is an inexpensive way to highlight blatant issues. However, you're not going to get nearly as specific, insightful, or in-depth feedback as you would from professional testers, testing services in the industry, or a group of fellow indie gamers who are willing to trade testing services for free!

You're a stay-at-home dad who often has his children test his games. How has this experience shaped your approach to game design? And has this influenced how you view the gaming industry?

Being a father hasn't changed my views about the game industry much. Maybe that's because I was a young father before I landed my first industry job. I believe all media producers should be socially aware and cognizant of the messages they create. I think we are all influenced, at least to some degree, by what we consume.



I was a huge first-person shooter fan even though some of those games held an M-rating. However, there were games with tremendously fun game-play that I did not play because I was not comfortable with the theme or message. As a developer, there were times when I declined opportunities to work on certain M-rated games for the same reason. That was a personal choice.

As a father, I'm trying to teach my children how to be conscientious consumers. I'd also like them to consume all media in moderation. That is my parental responsibility and a full-time gig nowadays in our media-rich lives.

I'm grateful that the game industry is broad enough to allow developers—even those of us who are particular about our product

themes—to find gainful, meaningful, and fruitful employment.

As an indie creator, what kinds of challenges have you faced trying to get distribution or funding?

Currently, Venabyte's funding consists of the time and money I am personally able to devote to the company. I have funded the necessary equipment, licenses, tools, and various expenses, but it is a one-man operation. This is good and bad: good because risk is limited to me and my family; bad because my time is extremely limited. There is only so much of

me to go around, and I'm not the fastest at anything! The right partners can help tremendously in development, funding, product marketing, etc.

While I'm on the subject, proper marketing and press are a tremendous obstacle for even well-crafted games, and they can be the last thing an indie developer wants to think about. Making connections for marketing trades with other indie products, press releases, somehow connecting with the proper market—it's all

very important—but it's also very tough, time-consuming, and daunting. I am not a connection or marketing guru; that is painfully obvious to me.

Fortunately our distribution can be handled easily through iTunes for iOS. For Android we will need to look into whatever additional channels are available outside of Google Play.

After developing your own indie game, would you consider joining forces with others or becoming part of an established company? What constraints would you face trying to work in a typical studio environment?

I would absolutely consider either option. Part of developing my own indie game was to prove to myself that I could still be produc-



tive and create a viable product. I think I still have much to contribute to this industry. I don't care what vehicle I'm a part of as much as I care about working hard with like-minded individuals on great products. Venabyte is my current vehicle and I'm enjoying the drive.

The biggest obstacles I would face working in a typical studio environment are the commute and the hours. It takes me about two to three hours just to get ready every morning, and I currently don't have a vehicle equipped

for me to drive. There are other obstacles such as food prep and restroom usage, but nothing a little old-fashioned ingenuity can't handle. Still, with so many e-commute opportunities, typical studio environments don't have to be the *de facto* for me.

Has your injury changed your perspective on games? For others creating games, what do you think they should keep in mind for consumers who have disabilities?

After my injury my appreciation for turn-based games has increased dramatically. Real-time games are usually too much for me. I certainly don't expect nor think it's a good idea for games based on real-time interaction to cater to us. However, if a developer creates a primarily turn-based game but adds one or two crucial elements that require quick reaction, they should know that it can ostracize the disabled market. Certain puzzle, mystery, or like games might consider this. I know we are a small segment of the market, but anytime a developer creates a truly turn-based experience they make a disabled person happy.

What are some games you enjoy playing now?

(Chuckles.) So, immediately after I say I don't do real-time games I'm going to tell you that one of my favorite games to play is *League of Legends*—an online PC game known for its quick real-time and team-based play. I'm not great, but I can hold a lane with Heimerdinger or play an OK Singed. Whenever I tease people by telling them they got *pwned* by a quadriplegic's pinky, they never believe me.

I have been waiting for a good turn-based mobile or PC RPG and have supported a couple of promising kickstarters. We'll have to wait and see.

I have to be very selective with what I play as I have a fairly short window of productive time each day.

Finally, what are some long-term goals you have for BLIZZ Words and Venabyte?

Market penetration for *BLIZZ Words* will determine whether or not we hook up Android and iOS head-to-head modes, create purchasable player icons, introduce stage and tile customizations, increase word collections, and more.

Venabyte's goals are to release three titles in a year's time and then reevaluate. In five years our goal is to have 10 successful, sustaining titles in a portfolio of 20 games. We are actively seeking partners or parties interested in collaboration. ❄

You can see video of Jon at work here:
www.youtube.com/watch?v=RtjmKHF9RIE

Studio Spotlight

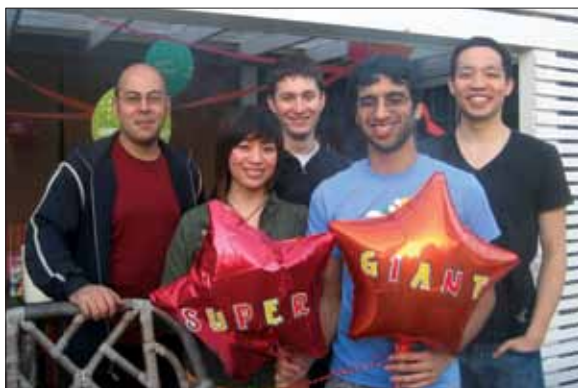
Supergiant Games

YEAR FOUNDED: 2009

URL: supergiantgames.com

HQ: San Francisco

EMPLOYEES: 10



Many game developers view their first jobs with large gaming companies as evidence that they've made it. However, with shifts in the gaming industry increasing employment insecurity and game designers growing tired of playing a small part in much larger franchises, many people are leaving larger companies to develop smaller games on their own—games over which

they have full control and about which they are truly passionate.

That is, in essence, the story behind Supergiant Games.

Founded by Amir Rao and Gavin Simon in 2009, and mainly consisting of former developers from Electronic Arts who worked on *Command & Conquer*, Supergiant Games describes itself as “a small developer with big ambitions: to make games that spark your imagination like the games you played as a kid.” Supergiant’s first game, *Bastion*, was announced in 2010, released in the summer of 2011, and made with only seven people. The company is now up to ten people, and its next game will be a sci-fi, turn-based, strategy game titled *Transistor* (projected release: 2014). Supergiant’s story provides insight into how smaller studios can thrive in the ever-shifting gaming market while developing a unique work culture that allows them to remain passionate about the games they produce.

Building Supergiant Games

The story of Supergiant Games begins at Electronic Arts Los Angeles (now known as DICE Los Angeles). It was at EA LA that Amir Rao and Gavin Simon first met each other and many of the others that they

would later hire, including Greg Kasavin, the current Creative Director at Supergiant. Looking back at their time at EA, Kasavin remembers that “we had a great time there overall and worked with a very talented team that produced highly-rated, best-selling strategy games for many years.” However, Kasavin notes that “we ultimately had little say in which projects we’d work on next, and we reached a point when working on smaller, more personal games became appealing to us.”

When Rao and Simon left EA, they chose the name Supergiant Games because they liked the cosmic, larger-than-life connotation of the name, especially in light of the actual size of the two-man operation. In Kasavin’s view: “It’s an aspirational name about thinking big.” In many ways, “thinking big” is not only a way to describe how Supergiant approaches game design, it also highlights just how far the studio has come since it started... in the home a founder was raised in.

You Can Go Home Again

Millennials are often described as the “Boomerang Generation” because so many young people end up having to return home after college. Amir Rao’s success with Supergiant places an entrepreneurial twist on this generational behavior because he returned home with the goal of building a business and developing the game that would become *Bastion*. “*Bastion* was self-funded,” says Kasavin, “and if we had to pay for studio space that would have crippled our budget, or forced us to make a smaller game or just make it much quicker.” There were trade-offs, of course—residential-grade Internet speeds being one significant example. Even so, working out of Rao’s childhood home helped establish the unique working culture of passion and efficiency that would help this studio come into its own.

Though one would think the founders of Supergiant Games might want to create a work environment



Supergiant Games describes itself as “a small developer with big ambitions: to make games that spark your imagination like the games you played as a kid.”

Supergiant Games

completely antithetical to what they experienced while at EA, there were aspects of working at a big studio they valued enough to replicate. “At EA we gained a lot of production discipline,” says Kasavin, “building relatively realistic schedules and respecting our deadlines. We had gone through the process of shipping games, doing the ugly and meticulous work near the end and getting it out there, then supporting it after it came out.” It was that experience that allowed Supergiant Games to produce *Bastion* in less than two years.



According to Kasavin, one key to their early success was the “creative chemistry between the people on the team and the sense of ownership that each individual here has over his or her areas of focus on the project.” This creative chemistry is a byproduct of the fact that many of the people hired were already connected to Rao which gave them a lot of “built-in trust.” And with that trust came the spirit of autonomy and self-management that is still at Supergiant’s core.

Another key aspect of Supergiant Games that deeply influences the culture of the studio is that the company aims to make games that stem from the interests of its employees rather than the shifting consensus of what a successful game can be. “A game like *Bastion* never would have happened if we polled a lot of people about what it should be,” says Kasavin. Nevertheless, Supergiant’s workers still enjoy engaging their fans. In addition to regularly responding to emails and messages, the team loves attending events like PAX and “meeting the people who play our games.”

The studio has also distanced itself from creating a “must-see/read/play” list for its employees and instead allows its developers to build off their own influences before they pull their work together. While Jen Zee, the art director, might be into art nouveau masterpieces, Kasavin, for his part, prefers reading fiction or books on the history of the ‘60s. “I try to maintain a list of influences on [a] project,” says Kasavin, “but it’s nearly useless because each of us draws from different influences, and then we do the work to pull it all together.” It’s a strategy that allows those at Supergiant Games to indulge in their intellectual and artistic interests while also allowing their games to successfully merge a wide variety of styles and influences.

Supergiant at Heart

As smaller studios become more common, Supergiant’s culture highlights how these studios can thrive. For instance, Kasavin says that Supergiant wants the team “to be small enough that when someone joins, it’s a big deal, both for us and for people interested in what we’re up to. As a small team, we only bring on those individuals who provide something that the rest of us could never do. Finding the right fit, in addition to someone with the kind of talent we’re looking for, is a big, time-consuming challenge, so it’s a huge victory when we do find that person.” Consequently, each person on the team provides something “essential to the end result. For example, without Logan, *Bastion* wouldn’t have used voiceover narration, and without Andrew we couldn’t have shipped the game on console.”

Supergiant has benefited from a significant shift in the gaming industry that allows a small studio to get a deal with a publisher even without being associated with a larger company. Kasavin explains: “Back in 2010, when we first showed *Bastion*, I think there was a lot of demand among big publishers to sign promising-looking independent games.” As a result, Supergiant “got a lot of interest from just about every big publisher you could think of.” The need for that sort of affiliation is becoming outmoded, however. “The big publisher model is rooted in the retail market,” he says, “where a lot of heavy-lifting and infrastructure is necessary to put a disc (or a cartridge, back in the day) into brick-and-mortar stores around the world. But today, smaller teams can publish their games directly on services like Steam or the App Store. I feel like this trend is still evolving as players become more comfortable buying games digitally.” As evidence of that shift, Kasav-



in cites the release of *The Last of Us*, which became available for digital purchase on the same day it was released on console. “I think the publishers have to evolve in what they do best along with everyone else in the industry,” he says.

Supergiant wants the team “to be small enough that when someone joins, it’s a big deal, both for us and for people interested in what we’re up to. As a small team, we only bring on those individuals who provide something that the rest of us could never do.”

Bastion was released July 2011 and became a critical and commercial success. It was such a financial success that Supergiant moved out of Rao’s home and into another location in San Francisco—a sure



sign that the startup had become an established company. In addition, Kasavin says, the success of *Bastion* also makes it possible for the team “to keep more reasonable work hours.” Nevertheless, the studio remains wary of complacency. Kasavin puts it this way: “It’s important to us to stay on top of the changing trends in game platforms because they are our lifeline. We want to be wherever people are playing games, and we like doing the work to bring our games to different platforms and audiences.”

Supergiant Games



An example of how Supergiant is staying “on top of the changing trends in game platforms” is the continued development of *Bastion*. The game is now available on iPad and iPhone, PC and Mac, Linux, Chrome and Xbox LIVE Arcade. Says Kasavin: “We haven’t limited ourselves to any one particular platform, and in turn, the game’s success wasn’t made on any one platform. We built each version of *Bastion* one after the other, which meant we could really focus on getting the controls and user experience as good as possible for each version.”

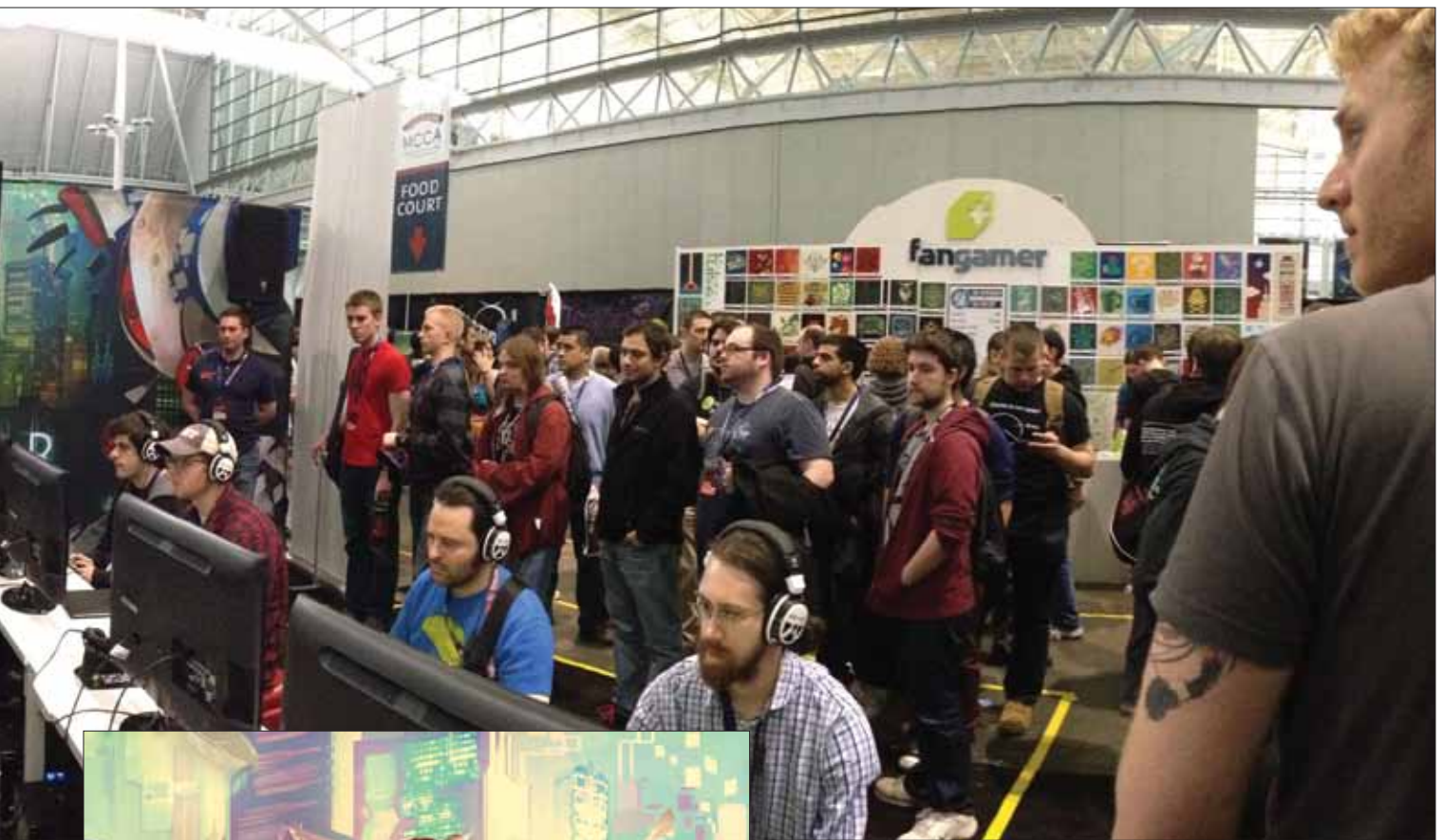
Building More Than Games

Supergiant has been fortunate in that it has been able to keep the team together to create their next game. And that’s important, says Kasavin. “We want to make games that can leave a lasting, positive impression on players and that do well enough that we can stick together as a team and make something else afterwards.” This statement highlights not only the personality of Supergiant, but also its long-term goals as a game developer.

Currently the team is focused on their next game, *Transistor*. According to Kasavin, Supergiant’s “goal

with *Transistor* is to create a new game with its own distinct identity; one that stands up to what we’ve been able to accomplish already.” Centered on a character named Red who is in possession of a powerful talking sword called Transistor, *Transistor* follows Red as she is hunted by something called The Process. “*Transistor* has been very well received based on what we’ve shown so far,” says Kasavin, “though we have a lot of hard work ahead in making sure it lives up to the potential so many people have seen in it thus far.”

Though Supergiant Games has only been around since 2009, it has managed to create a successful game and survive during the gaming industry’s current market shift. “Running a large studio is a tough business,” says Kasavin, “but so is running a small studio. It’s just different. The economics of the game industry, and to some extent the economy as a whole, have caused many larger studios to shutter in recent years.” Though people losing their jobs is a disappointing reality, Kasavin does feel something positive can come from the shrinking of larger studios. “The silver lining is many smaller studios have emerged, and there’s a real market for smaller downloadable games.” ❄



“We want to make games that can leave a lasting, positive impression on players and that do well enough that we can stick together as a team and make something else afterwards.”

Exclusive Interview

Gameloft's Samir El Agili

Casual Connect was able to recently talk to Vice President of Production at Gameloft Samir El Agili about his background, his work at Gameloft, and his thoughts on the gaming industry and its future.

Q&A

CASUAL CONNECT: You got a degree in Aerospace Engineering from Queen Mary, University of London. What made you want to switch from aerospace to video game production?

SAMIR EL AGILI: Like many children, my dream was always to become an astronaut! So I figured the best way to achieve this was to learn how to build spacecraft. So I became an aerospace engineer. By the time I received my degree, I had realized how difficult it was to enter the space industry, yet avoid the military aspect. So I was at a crossroads and made the choice to try and pursue my other passion: video games. I knew a career in video games

I knew a career in video games would give me the chance to build more spaceships and go into space many more times than a career as an aerospace engineer—virtually, that is.

would give me the chance to build more spaceships and go into space many more times than a career as an aerospace engineer—virtually, that is.

Thus, I received a Master's Degree in business from HEC School of Management in Paris and later joined Gameloft.

Before making your way to video games, you worked at PC Star and Schneider. How did these experiences shape how you approached the video game industry?

I founded PC Star when I was 17 years old, and it was my first entrepreneurial experience. I was building customizable PCs specific for users' needs, but instead of having one say, "I want a 1 Ghz CPU and 256 MB of RAM," he just had to say, "I want a PC for games," or "I want a PC for video editing." I made several mistakes along the way in project management, scaling growth, managing a tight budget, managing quality and customer support, etc. This experience taught me many skills I still use today as the head of gaming studios. At Schneider Electric, I worked as a team manager. This helped me shape my management style, which is crucial when you are a game producer or studio manager.

Since you started PC Star, how do you think the gaming industry had changed?

Tremendously! Back then video games were primarily played on a few consoles, PC and arcade machines. The game catalog and genres were quite limited. These games had an average price of \$40+ and therefore the average player only played a handful of games per year. Only a specific demographic of male teens and young adults in developed countries were really playing video games. In fact, back then, you could find people who had played all games that had been released in any given year—which sounds ludicrous if you compare it to today.



Samir El Agili;
VP of Production, Gameloft;
New York, NY

Samir El Agili



Today, mobile devices are where the majority of video games are played in terms of volume. The demographic has greatly widened to include almost everyone who owns a cell phone anywhere in the world. The average price for a game is very low and many of them are free. In fact, the number of games and game genres available on the market is so large that it's impossible for someone to play them all. Of course, we still have the console and PC games that we gamers love, but it's undeniable that this industry has greatly evolved—and for the better.

Our goal and our pride as a part of the gaming industry is to maintain our products at the highest level of quality and deliver more great and fun experiences to all gamers all over the world. There is nothing we love more than seeing people play our games and have a great time!

Did you play video games as a kid? If so, what were some of your favorite games?

Of course, and I can't tell you how many times I heard my parents say, "If you don't stop playing those video games, you'll never find a good job." Pretty ironic! I had many favorite games as a kid, but the ones I recall spending the most time on are PC games like *Civilization*, *Heroes of Might and Magic* and *Day of the Tentacle* and console games such as the *The Legend of Zelda*, *Tetris*, *Shenmu*, *Soul Calibur* and *Fifa*. A wide range of styles.

I still play a lot of console video games. You can't produce great games if you don't keep playing—it's like asking a movie producer if he still watches movies. Some of my recent favorite games are *Max Payne 3* and *Borderlands 2*. Right now, I'm playing *Tomb Raider 2012*, *The Last of Us*. One of my favorite non-Gameloft mobile games has been *Jet Pack Joy Ride*, and I love tower defense games.

Looking back on your career, what are some things you've learned about the video game industry that would surprise many fans?

The first, most surprising thing that I learned was just how many games are started but never get released. Before entering the video game industry, I did not know that. The reason

for this is that it's hard to making a great video game. There is no point releasing an average game, so most publishers will decide to kill an average game in the middle of its production rather than spend more money to release it. These decisions are never easy to make, and I'm sure some of them may have been mistakes.

Another big surprise for fans is the effort and time it takes to finish a game. A game can be 90 percent finished, in terms of game-play, art, code, etc., but that last 10 percent of polish is extremely difficult to attain. That last 10 percent can take just as long as reaching the first 90 percent of the game.

Another thing that surprised me is how often a game can start with one vision and one direction, but by the time it is released it has become a totally different game. I have seen games start as top-down racing arcade games and later become full 3D first-person racing-simulation games.

We take every fan's comments and suggestions to heart, and we do our best to incorporate their feedback to make games that are high quality, affordable and fun to play.

Why do you think Gameloft has been able to build such a sizeable and passionate fanbase? What role do fan responses play in shaping game development?

Gameloft recently reached 10 million Facebook fans, and we couldn't be more thrilled. We try to delight our fans on all social media channels with exciting news, artwork and other behind-the-scenes content, and we have formed a solid fan base over the years. We take every fan's comments and suggestions to heart, and we do our best to incorporate their feedback to make games that are high quality, affordable and fun to play.

Samir El Agili

On this note, fans often say they may not like something that still sells fairly well. How do you balance the concerns of outspoken fans, even though sales may suggest something different?

We always focus on quality and fun first. There is an important milestone in the production phase that we call the First Playable Prototype (FPP), and our rule at Gameloft is that no game can enter full production until that FPP can be enjoyed by most experts who review it. However, as the market opens up to a new audience, we try to make our casual games enjoyable for as many people as possible. Sometimes, one of our beloved fans does not like a direction we took, even though the larger audience loves it. This is also why we have more targeted games, like *Dungeon Hunter 4* or *Modern Combat 5*. No matter what, we always listen to our fans and do our best to make decisions based on what we think they will find fun—not just what we think will sell most to a wide audience.

When people think of mobile games, they tend to think of fairly simple games like *Fruit Ninja* or *Angry Birds*, yet Gameloft's games are incredibly elaborate and full of depth. How does Gameloft deal with the tension between making a fun game that a person will play to kill a few minutes (on the one hand), while also wanting to create a story with nuance and character development (on the other)?

You can make a very immersive game while staying casual in your control and game-play, for instance our recent release, *Despicable Me: Minion Rush*. This is a game based on a known genre, the endless runner, but it has beautiful graphics, a much greater sense of immersion and varied game-play. All the while, it stays very casual in terms of control and session times.

At Gameloft, we are certain that making a game with a deep story and very immersive, advanced 3D graphics can work with mobile, very simple controls and short five-minute sessions. If you look at *Asphalt 8: Airborne* or *Despicable Me: Minion Rush*, you will find these same qualities.

In 2013, Gameloft released *Iron Man 3—The Official Game*. You are also set to release another Marvel Comics game *Thor: The Dark World—The Official Game*. Could you comment on how this deal with Disney/Marvel

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DUNGEON HUNTER 4



DESPICABLE ME: MINION RUSH



ASPHALT 8: AIRBORN



THOR: THE DARK WORLD



Samir El Agili

came about? Additionally, given that both Iron Man and Thor exist in comic books and films, which source material do you have to be more loyal to?

We love superheroes! Who doesn't? So we are always looking to work with licensors on properties with great characters. It's been a great experience working with Marvel on *Iron Man 3* and *Thor: The Dark World*. I think we've both enjoyed the experience of working together to bring these great characters and universes to life in our games, so it's natural that we would keep working together. About the source material, we receive pretty clear guidelines from our partners. Our teams usually have a passion for the brands and come to the table with new ideas. In the end, it's always a collaborative and creative effort.

Gameloft has been on the cutting edge of new programming. As your website states, "Gameloft was one of the first companies in the world to develop games for Java- and Brew-enabled handsets and quickly created a large lineup of games for their users, including impressive mobile adaptations of console games such as *Prince of Persia* and Tom

Clancy's *Splinter Cell*." In addition to HTML5, what do you feel will be the next big development for mobile gaming?

Convergences. I envision being able to play the same game on your smartphone while waiting for your coffee at Starbucks, on a tablet while sitting at the airport, and on your TV screen with your tablet as a controller when you get home.

New touchscreen technology will also be huge for games. The problem with touchscreen controls today is that you don't receive feedback at your fingertips when you touch the screen. But that will change. Much innovation will appear in the types of games and types of controls.

What software and hardware obstacles do you think will have to be overcome for your vision of convergence to come true? Do you think this push for convergence may force the industry to standardize the software used to produce and run games?

Yes, I do think convergence will be a big part of the future of gaming and it's already partially here. There are a lot of games that I can play on the go and also sitting down on my couch in front of my TV. Unfortunately I don't think that a push to convergence by developers and customers will really force the industry to standardize its software to produce and run games. I do think, however, that if a new set of quality devices that converge perfectly together is released on the market, developers like Gameloft will find fantastically creative ways to develop games that converge really well across these platforms.

Finally and without violating confidentiality agreements, what are some projects Gameloft is working on that fans should look out for?

At E3 this year we showed off some great upcoming titles like *Asphalt 8*, *Brothers in Arms 3*, and *Modern Combat 5*. Since then we've announced new titles like *Thor: The Dark World*, based on the upcoming film. We're always working on new games and have lots of great projects in the works that we're confident will push the limits of gaming. Stay tuned! ✨

IRON MAN 3





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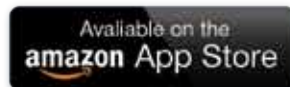


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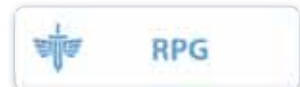


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Here's to Your Health



New Games Designed for Fitness and Well-being

As gaming has expanded into mobile markets, at a time when concerns over America's health has increased, it makes sense that studios would begin to develop fitness and health games for the mobile and casual gaming market.

"Anything that helps create truly healthy habits

at a young age are important in ensuring today's children don't become the first to live shorter, less healthy lives than their parents," said Jeffrey Levi, Ph.D., the Director of the organization Trust for America's Health. It's a stark indicator of just how troubling America's health problems have become. Levi acknowledged that the "growing public attention to this problem, as reflected in the First Lady's Let's Move campaign, has also caused many of us to think about what we as individuals need to do to be healthier." However, he does point out that this has only resulted in obesity rates not getting worse.

Two reasons why healthcare costs are increasing are the country's obesity rate and the nation's aging population. So with the cost of health care increasing every year in the United States and worldwide, many are struggling to figure out ways to help people live healthier lives at an affordable cost. In addition to the standard promoters of workout videos and weight-loss books, game developers are creating unique programs with real-world health goals. Three games that particularly stand out for their approach to encouraging users to become healthier are *Zombies*, *Run!*, *Lumosity*, and *Yummiloo*.

A Brief History of Sweating to Video Games

Of course, attempting to inspire healthy behavior through video games is nothing new. Nintendo introduced the world to the Power Pad in 1986 and produced games like *Dance Aerobics* and *Athletic World* for it. Designed as a large mat that had pressure-sensors in it, the goal of the Power Pad was to get more players physically engaged in whatever game they were playing. Though Nintendo would only make games for the Power Pad until 1989 (the last game being *Short Order/Eggsplode!*), it did set an industry framework for similar games to be developed in the future (think: *Dance Dance Revolution*).

With the development of motion-sensing gaming systems, these types of games experienced a re-emergence in the home gaming market because of the popularity of games for the Wii and the Xbox Kinect. *Just Dance*, *Kinect Sports*, *Active NFL Training Camp*, and *Zumba Fitness* are all games that take advantage of these systems. One company even developed the PCGamerBike—an exercise bike that could be used for computer games—and released it in 2007.

As gaming has expanded into mobile markets, at a time when concerns over America's health has increased, it makes sense that studios would begin to develop fitness and health games for the mobile and casual gaming market. However, while console games developed hardware and software that allowed a person's body to truly become part of the gaming experience, fitness games designed for the casual and mobile market have found unique ways of engaging players.

Zombies, Run!

Getting Healthy with the Undead

One way some mobile fitness games have managed to engage users is by layering a storyline into the fitness experience. In a recent *Wired* article (“Checking Up on Games for Health 2013”), Michael Andersen refers to a running class in which the instructor asked those in “to explain why they wanted to get better at running.” One student quipped: “I want to be able to escape from the zombie horde.” Another member of the class, author and novelist Naomi Alderman, became captivated by the statement.

Alderman knew Adrian Hon, CEO and co-founder of the video game company Six to Start, and brought him the idea of a game based on running away from zombies. Hon, who is an avid runner, immediately embraced the idea.

To get the project going, Alderman began writing several scripts for “missions” that runners would have to complete. Some of these missions would be running to collect water and supplies, while others centered on trying to help other survivors—all while trying to avoid the zombies. As runners accomplish these missions, their base grows and, in turn, they gain access to new levels. The key to the concept was the use of a mobile phone’s GPS or accelerometer to record distance, time, pace, and calories burned on each mission. Building off Alderman’s scripts, Hon’s team developed the game further by creating its visual interface and casting for voice actors.

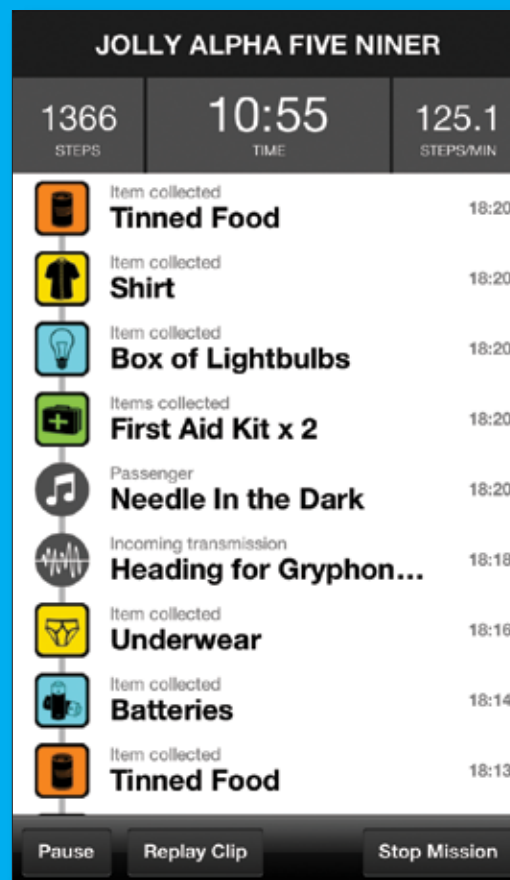
For additional help, the team turned to Kickstarter to raise the additional funds needed to complete the project. Even though they set out to raise just \$12,500, Alderman and Six to Start raised over \$72,000 from 3,464 different backers. It was a Kickstarter success that not only allowed them to complete *Zombies, Run!*, but clearly indicated that there would be a large number of people interested in buying the project. That response gave the creators confidence that consumers remain interested in their game even the current popularity of zombies begins to wane. Says Alderman, “Interest in good storytelling isn’t going anywhere, nor is an interest in getting healthier.” As for Hon, he’s “not at all convinced that zombies are going away any time soon, as they’re the only humanoid-shaped antagonist remaining that players can feel perfectly fine about killing in various ways.” He goes on to state that “most people who buy the game aren’t huge zombie fans—they just want a fun way to exercise. If the interest in zombies dies down, the game will still be fun and effective.”

Zombies, Run! has been met with such success that Six to Start and Alderman have decided to build off of it and create a game that encourages people to walk more. With funding from the UK’s Department of Health for the NHS, Six to Start is currently developing *The Walk*. Set to come out in early 2014, *The Walk* is designed to be a techno-thriller that its

makers hope will get players to walk 10,000 steps a day. Overall, the success of *Zombies, Run!* comes not only from its commercial success; the game also shows that fitness games can have a central narrative-thrust that immerses the player in a fitness experience without relying on traditional workout rhetoric. Instead of a video telling you to think of the calories you’re burning, Six to Start and Alderman have created a game in which the primary goal of fitness is layered beneath a story in which the user is focused on outrunning zombies and helping to rebuild civilization.



by Nicholas Yanes;
Iowa City, IA



Yummiloo

Getting Kids (of All Ages) to Eat Their Vegetables

Zombies, Run!, *The Walk*, and similar games help people burn calories and lose weight by moving more, but a significant aspect of one’s health is directly linked to what foods they consume. As Jeffrey Levi, Ph.D. told *Casual Connect*, people are “eating more things that are less healthy and contain more calories.” A reason why it is difficult to encourage healthy eating habits is that in addition to unhealthy foods being easily available to purchase, many people are just taught negative eating habits from a young age. Two companies working to instill positive eating habits in children are Yummico and Night & Day Studios.

Yummico is a new children’s media company that is developing intellectual properties designed to



entertain and educate children across multiple digital platforms. In addition to having several industry veterans, the person overseeing Yummico's creative vision is Traci Paige Johnson, the creator of *Blues Clues*. One of their projects is *Yummiloo*, which they describe as "a food adventure series designed to expose preschoolers to healthy eating through irresistible characters, stories, and games." To help expand *Yummiloo*'s digital presence and appeal to

sire to "create a resource for parents that would encourage healthy eating habits with their little ones. As any parent knows, getting little ones to eat their fruits and veggies can be nothing short of a miracle. Our hope was that by creating adorable characters and their world of Yummiloo we would assist in cultivating young, adventurous, healthy eaters."

In addition to having people who have been developing media and children's entertainment for years, the team of Night & Day Studios and Yummico worked with Dr. Natascha Crandall to help enhance the educational aspects of the program. The team wanted to be sure that "the app as a whole was in line with an expert's educational principals."

Given that the temptation of unhealthy food is ever present, *Yummiloo Rainbow Power*'s success is dependent on how well it instills healthy eating habits in its users. As Kiehl says, "The game creates a fun, playful environment where kids can learn the value of eating foods" that are nourishing. As such,



The main inspiration for *Rainbow Power* was the desire to "create a resource for parents that would encourage healthy eating habits with their little ones."



children, Yummico partnered with Night & Day Studios to create the game *Yummiloo Rainbow Power*.

The game centers on characters called the Yum Yums as they go to an annual carnival. The problem is that none of the rides at the carnival are working because the Rainbow Machine—which powers the fair—is out of fuel. In order get the Rainbow Machine running again, players have to harvest different colored fruits and vegetables from a nearby garden. This portion of the game not only teaches them the names of each fruit and vegetable, but it also introduces them to the idea of a compost bin.

According to Kate Kiehl of Night & Day Studios, the main inspiration for *Rainbow Power* was the de-

their hope for this gaming experience is to make "healthy fruits and vegetables even more exciting and desired than junk food."

Moreover, this is how *Rainbow Power* displays an important similarity to *Zombies, Run!*. The final destination for players of each game is to be physically healthier than they were before they began playing. However, while *Rainbow Power* does explicitly tell children about healthy foods, both games work by engaging players in a heroic narrative. In other words, the success of these two games stems from the fact that they emphasize the journey over the destination.

Focusing on the future of the Yum Yums, Yummico and Night & Day Studios are currently aiming to keep *Yummiloo Rainbow Power* up to date while working to feature these characters in other games, apps and expand their brand into television and other media. The ultimate goal is to bring food education to many more children.

Lumosity

Keeping the Mind Active

As the populations of the United States and many industrial countries begin to enter their twilight years in greater number than ever before (a trend that is often referred to as “The Silver Tsunami”), modern social infrastructures are beginning to struggle as they handle an ever-growing pool of seniors and retirees. In addition to these problems dealing with the economics of more people working well past the age of retirement, it also means that problems associated with the decline of mental health that occurs in old age will become a more pressing issue.

One person who had personal and professional experience with neurological health issues is Michael Scanlon. In addition to being co-founder and Chief Scientific Officer of Lumos Labs, Scanlon studied neuroscience as a graduate student at Stanford University. He has published research on the subject and has overseen research collaborations at several universities. While pursuing his studies, two of Scanlon’s grandparents were diagnosed with Alzheimer’s disease. That diagnosis motivated Scanlon to want to apply his research to the real-world.

At the time that Scanlon was becoming a researcher in the early 2000s, Kunal Sarkar was at a private equity firm that had invested in 24 Hour Fitness, the nationwide fitness chain. According to Dr. Joe Hardy, the Vice President of Research and Development at Lumos Labs, “Scanlon and Sarkar realized that there was a natural fit between their two fields—training bodies and training brains.” They combined their expertise and started Lumos Labs.

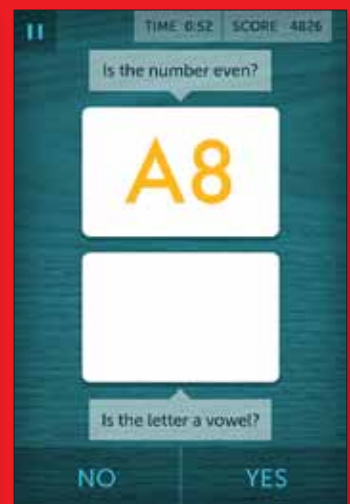
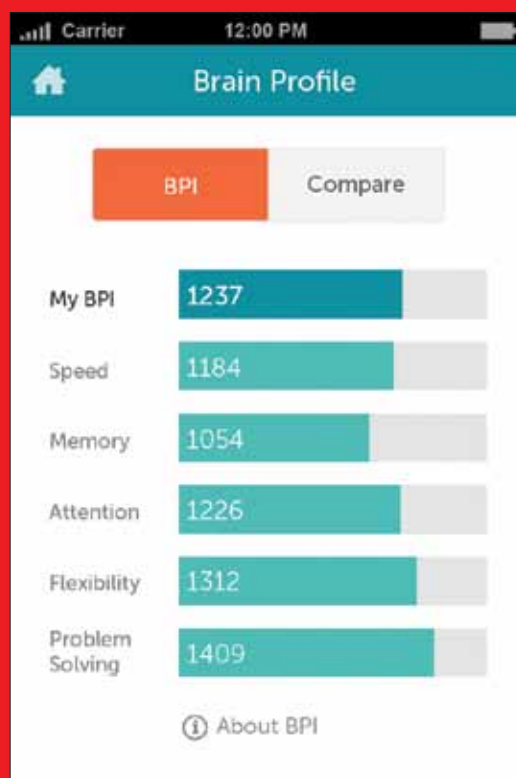
Unlike *Zombies, Run!* and *Yummiloo*, which focus on physical health, *Lumosity* is designed to improve cognitive functions. “Based on the science of neuroplasticity,” which Dr. Hardy defines as “the brain’s ability to change and reorganize itself given the right kinds of challenges,” *Lumosity* is a brain training program in which a user goes through a series of games designed to exercise ones’ cognitive skills, including memory, attention, flexibility, speed of processing and problem solving. To develop *Lumosity* and stay up to date on the latest neuroscience, Lumos Labs has its own in-house R&D team of experts in developmental and cognitive psychology. Additionally, Lumos Labs created the Human Cognition Project, a research effort that, according Dr. Hardy, “works with neuroscientists, clinicians, educators, and other researchers from around the world to further the study of human cognitive performance as well as improve *Lumosity*.”

Another clear difference between *Lumosity* and games like *Zombies, Run!* or *Yummiloo*, is that it doesn’t rely on a narrative to get players to engage in healthy behavior. In other words, while someone using *Zombies, Run!* can escape into the game’s narrative, people who engage some of *Lumosity*’s puzzles

will always be aware of the fact that they are engaging in a series of mental exercises.

However, even if their service lacks narrative escapism, Lumos Labs has created an incredibly successful product, with over 45 million users worldwide. Dr. Hardy claims that Lumos Labs has created one of the fastest growing consumer subscription sites and the top education app in the iTunes App Store. “Thousands of users have written in telling us about how *Lumosity* has helped them remember more, think faster and perform better in everyday life,” says Hardy. Currently Lumos Labs is building off its success by working to make versions of *Lumosity* for multiple languages and adapting its product to multiple mobile devices in order to appeal to an international audience.

“Thousands of users have written in telling us about how *Lumosity* has helped them remember more, think faster and perform better in everyday life,” says Hardy.



Conclusion

There is still a great deal of work to do. Says Dr. Levi, “We have to make sure games teach the right lessons and improve health.” He adds, “Every child is different, so games have to be geared to the cultural competency of all the different communities in the United States.” It is an observation not only on the state of health and social fragmentation in the US, but it also highlights the potential for a multitude of different gaming solutions to the world’s growing health concerns.

Alderman remains optimistic about the prospects of good games leading to better health. “An interest in good storytelling isn’t going anywhere,” she says, “nor is an interest in getting healthier!” ❄

Join the Club

How to Build a Kick-Ass Community for Your Game

Game communities are successful for the same reason all communities are successful. They thrive when encouraging openness, inclusiveness, participation, discussion, friendship, and competition.

Game communities are meeting grounds for gamers who share similar interests and passions. If games were sporting events, game communities would be sports bars. They are places where friendships are formed and cultivated, discussions are had, and differing opinions are debated. More than anything, these communities welcome gamers home. As people, we feel most like ourselves when we are engaging with the things we are most passionate about in life. For gamers, that engagement happens in our game communities.

Game communities are successful for the same reason all communities are successful. They thrive when encouraging openness, inclusiveness, participation, discussion, friendship, and competition. While successful communities share similar fundamental tenets, each has a variety of nuances and unique challenges (socio-economic status, age variance, and pseudonymity to name a few) that can affect how easy or difficult they are to execute.

This article illustrates why it is essential to build a community around your game, how to get started, and what details you should consider in order to ensure success.

Reasons to Build a Game Community

As a game developer, you are interested in what your fans love (or hate) about your game. Having a place where you can observe and interact with your gamers provides a great opportunity to increase fan engagement while gaining insight into what people truly think. However, if you are only expecting a bunch of positive feedback, you will be sorely disappointed. Gamers can be brutally honest when we find something we don't like, so be prepared to handle both the good and the bad.

Communities also provide a place to recognize and reward your fans with contests and giveaways. Gamers love free stuff! A strong community makes your game more desirable to potential players and increases its discoverability. If these benefits seem interesting and useful, then you should ensure that you have a quality game community in place.

Communities will naturally form by themselves, but they tend to be noticeably more powerful when

the game developer takes a significant role. This can be extremely valuable to both the gamers and the developer. Developer-run communities tend to be more civil, last longer, and provide greater value.

Where to Begin

Understanding the needs of your gamers is crucial to building a successful community. Some games require nothing more than a healthy atmosphere for discussion, while other games require advanced tools like sharing game-play videos or character editors.

You can think and guess all day about what your gamers might need or want, but the best solution is to just ask. Conduct a survey or, even better, talk to as many of your gamers as possible. Let them know you are setting up a community specifically for them and ask what they'd like to see in it. Don't be intimidated by the idea of sending a survey. If it is concise, relevant, and demonstrates that you have the best interests of your gamers in mind, they will be happy to participate. It is absolutely crucial that you understand your gamers' needs. ASK!

From the outset you should do all you can to make *everyone* feel welcome. "Bash the troll, save your soul." In other words, set the tone early. I cannot overstate the importance of making your community a place of participation and inclusiveness early on. Yes, communities take on a life of their own at some point, but your job during the early stages is to clearly define the dynamic before the community grows beyond "control." Help everyone feel welcome—newbs and pros alike. Make it clear that the community is a place for connecting with others rather than unleashing pent up aggression on unsuspecting newbs. Send private messages to people who are misbehaving and just ask them to knock it off. Explain the community's goals and values. If you want an inclusive community, do not hesitate to write it in big letters somewhere.

At the same time, try to create an area in your community for direct-gamer-to-developer feedback. Prove that you are open and willing to listen.



Rules about Rules

Openly outlining what is acceptable behavior should be one of the first orders of business when creating a community. Do you want a community where people can swear? What about modding? What about spoilers? Make it clear to your gamers how they should behave. This is of upmost importance and will get you off to a good start. Here are some basic rules about rules:

- Remember, there is no right or wrong set of community rules. Maybe adult language is an essential part of your game and your gamers love it. You wouldn't want to restrict language in that community, or it might end up a ghost town. Knowing your audience is extremely critical when laying out rules.
- Some of your dedicated members may like the idea of transforming your community into some form of secret society, with secret rules and crazy traditions that prevent new members from easily becoming acclimated and feeling welcome, but do your best to prevent this from happening. It is a toxic trend. In dedicated communities, this hurtful habit prevents communities from growing and thriving; an open and welcoming place suddenly becomes an exclusive club.
- Put more simply: Good rules help ensure that everyone has a good first experience.

Allowing your fans to easily share in-game content in your community can really help build long-term value. Encourage the sharing of screen shots, character images, game-play footage, fan art, or proposed characters/levels.

- Have clear and easy-to-understand rules written in plain language. If the list of rules is longer than a page, you've likely overdone it.
- Rules should define how people ought to engage with each other, not what they should say.
- If a rule is consistently violated by multiple people, consider revising it. You've either missed the mark in principle, or the language is unclear.
- Rules should not list punishments. This just puts people in the position where they have to decide: "Is it worth it?"
- Rules should use positive language and include explanations as to why they are rules. They shouldn't sound like laws, but rather encourage certain types of behavior. For example: "Gamers who play our game come from all different walks of life and are ages 13-60. We try to keep the language appropriate for all audiences."
- Make sure all rules affect everyone equally. Poorly thought-out rules can put some people in a superior position, ensuring others will have bad experiences.

Encouraging Competition and Collaboration

Successful communities often enable and encourage a healthy level of competition. Competition tends to form around social activities or in-game activities. Social competition typically centers on status and power in the community. Encourage social recognition around positive behavior like answering questions, being helpful, or creating valuable content for other community members.

Game competition naturally forms around in-game performance yet the recognition for that performance often happens in the game community instead of in the game itself. Leaderboards are boring unless they can be shared and seen by the majority.

Successful competition requires strictly enforced rules. Cheaters can ruin it for everyone else. Monitor it carefully.

Communities are also a great way to foster collaboration. If your game has a group, guild, or clan mechanic, it should be reflected in your community. This could mean anything from private forums, a clan badge on users' profiles, or custom-built guild pages that enable coordinating and loot-sharing. The sky is the limit.

The main goal is to give groups a place to communicate when they are not in the game. Mobile-accessible group areas help keep groups active and engaged no matter where they are.

Sharing In-game Content

Allowing your fans to easily share in-game content in your community can really help build long-term

value. Encourage the sharing of screen shots, character images, game-play footage, fan art, or proposed characters/levels.

There are various ways to do this. While forums are not ideal for this type of activity, a Tumblr-style newsfeed has proven to make shared content far more accessible. This accessibility makes it easier for fans to engage with the content. Other things to keep in mind:

- Make sure in-game content can easily be shared.
- If in-game screen shots are large files, make sure your server supports that.
- Keep the rules about file types and content to a minimum. Unless it can infect your server, leave it alone.
- Don't restrict modification/enhancement. If people want to draw mustaches on your characters, let them. Don't bust morale by being restrictive.

Growing Your Community

When your community has grown to the size you can no longer manage with your internal team (and it inevitably will), the best thing you can do is enlist the help of your most dedicated members. When choosing which folks will be the best to help moderate and manage your community, look for the following traits:

- Honesty and trustworthiness
- Dedication and passion about your game and the community
- Willingness to put the health of the community above their egos
- Ability to get along with different types of people

Communities can grow just by their very nature. If they are healthy and fun, more people will want to join them, but you can also use mechanisms of growth as an extremely important function of community building.

Make sure to leverage in-game relationships. Leverage gamers outside of game relationships to expose new people to your game/community. Announce growth milestones to inspire confidence. When the 1,000th or 100,000th person joins, tell everyone. It builds trust and justifies the personal investment decision. Don't trick people into inviting anyone or sharing your message to people they don't intend to share with. This erodes trust and cheapens the experience.

Building a community around your game is hard. It takes time, effort, and passion. That hard work tends to be rewarded with activity, energy, and growth. When gamers feel cared about and listened to, the community and game will thrive. Absolutely. ❄

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Marketing 101

Fundamentals for Success

When I started out in marketing, I made the very common mistake of overestimation. I attacked problems with comprehensive strategies and lofty goals, expecting to overcome any challenge. But I soon came to realize that, although marketing is great in many aspects, true success requires careful planning and realistic expectations. Like chess pieces, every marketing approach has a role and every move has a purpose.

Marketing small and independent games comes with a unique set of challenges. Getting around the restrictions of distribution platforms, managing a

community of gamers, and keeping a positive brand image simultaneously can quickly eat up all of your time. Some of these challenges are unavoidable, but smart marketing plans turn these challenges into opportunity.

Before beginning the excitement of planning, you should be aware of a number of marketing fundamentals that ap-

pear frequently in strategies for gaming companies. It is important to learn the capabilities and limitations of these cornerstone pieces to make sure you are picking the ones that best fit your goals.

Identifying Users

Figuring out who your users are is the foundation of any marketing plan. There are two approaches to identifying users: quantitative and qualitative. If you have a product in-market already, you can take a quantitative approach utilizing sales and analytics data. However, if you have no existing products, have been dark for a while, or are trying to move into a new demographic, you should take a more qualitative approach.

Consumers are all different and have distinct preferences and styles of communication, especially when it comes to gaming. For example, if you want to appeal to a young male age 18 to 25, you are going to need different tactics and messaging than for a female aged 28 to 40. By using market research and your own data, you can isolate this information and have a better idea of how to approach your audience.

The next step is learning where your users go to communicate. If you have decided your demographic is the female group mentioned above, you should probably skip over Kotaku or GotFrag. A wiser choice might be mommy blogs, Reddit, or other social media sites. Social sharing is particularly popular within this demographic and would be a good place to start. If you need something to point you in the right direction, it is best to rely on existing research, or check your own referring sites to see where most of your traffic is coming from.

Unfortunately, there are some limitations to predicting who and where your users are. Each and every game is unique, which makes it challenging to tell who is going to be most receptive. Remember that while you might have a brand or a product similar to something else, having an identical marketing plan might not suit your game nearly as well.

Companies also face the danger of losing their personality as they try to fit their target market. Games are an experience, a lifestyle for many people, so having some personal flare and quirkiness in your marketing is important. Unfortunately, when you are focusing on the user so heavily, it can be very easy to lose sight of the qualities that make you and your company awesome.

Building a Community

After identifying your fans, you can begin to plan how you want to build your community. The term community management is becoming more and more prevalent in marketing, making it seem that everyone wants to build a massive community and have it churn out money. While building a community is

It is important to learn the capabilities and limitations of these cornerstone pieces to make sure you are picking the ones that best fit your goals.

a keystone piece in many marketing plans, there are also falls. The old standard for community outreach was plastering a bunch of ads all over the place, but this is 2013 and we have social media.

While you might have a brand or a product similar to something else, having an identical plan might not suit your game nearly as well.

Getting people to check out your community, requires engaging with your users. This can be simple. For example, you can gain tons of brownie points with players just by responding to tweets and retweeting their messages (where appropriate). There are tons of ways to expand on this, but going into that would take an entire series of articles.

Another big part of community management is identifying people with large platforms to reach out to your target market. You can see a great example of this in the recent "Let's Play" trend on YouTube. Many developers, especially indies, have taken to sending games to these content producers, like Total-Biscuit or Pewdiepie, to piggyback on their brand and get in front of a massive and voluntary user base. In marketing, we call these "brand advocates." These folks have built themselves into icons people trust, and their followers will flock with them to whatever community they point to. Their time is limited

Figuring out who your users are is the foundation of any marketing plan.

though, and getting them to showcase your game can be a challenge.

As far as limitations go, to use the old cliché, Rome wasn't built in a day. Building a community takes a massive amount of time and man-hours. You will likely need at least one dedicated manager to handle all the interaction that tens of thousands of fans require. Even with consistent interaction, it will

take people a long time to warm up to a brand and join its community.

Finally, while one good game and proper engagement can build a positive reputation and net a lot of loyalty from gamers, you need to make sure you maintain those levels of community interaction (and game quality). A sudden drop in quality or customer service can be disturbing to loyal fans. Being open with and attentive to those fans is the key to avoiding this pitfall.

Word-of-mouth

Word-of-mouth is arguably the most unpredictable option for a marketing campaign. It refers to getting users to talk amongst themselves about your product, which is inherently difficult to control or even facilitate. Despite this, many companies rely on word-of-mouth almost exclusively as it is cheap and the potential reward is high. This is especially true of indie and small game studios. Unfortunately, many of these studios fail to generate the buzz needed to drive sales and sustain themselves. Though unpredictable, there are many tactics available to facilitate buzz and get potential users talking.

One of the ways to get people talking is direct interaction with a brand. Brands are able to act as an individual online through social media sites, which allows them to take on a personality. Talking to consumers gives them the feeling that you are listening and that there are real people behind the screen. Just being acknowledged will increase their confidence that a brand they like is one they can trust, making them more likely to tell their friends.

Speaking of loyalty, part of driving word-of-mouth is to get your brand advocates to talk about you. They will become some of the biggest drivers behind the promotion of your brand. Marketers can help you reach out to them with new content or offers, or just to engage them in conversation. All of this gets people talking, and that is the goal. As an added bonus, brand advocates often are viewed as impartial third parties. When fans see them advocating for something, they are assured that the brand is good to follow.



by Tom Swanson;
Marketer, Razorfish;
Seattle, WA

"So community building is a marketing tool? Go figure. Good to know."

—Jonathan



The problem with word-of-mouth is that it is extremely unpredictable. Small companies with minimal social presence can hit the right announcement at the right time and drive huge amounts of awareness. Other times a fantastic announcement will go completely unnoticed. Marketers seek to maximize the chance you will get noticed and make that momentum go as far as possible.

Word-of-mouth is also notoriously difficult to measure. How much buzz was due to your marketing efforts and how much was due to the game, the content or whatever else you produced? What metrics can you look at to tie this chatter back to a measurable return? Why was what you did successful? The more questions you ask, the more challenging

it may become to find the answer. As a data-centric marketer, this infuriates me because there is no such thing as a “controlled experiment” in the social space. This is a frontier though, and new methods of measurement are being discovered almost daily. It is important to keep your fingers on the pulse of these developments and find the one that works for you. Do not hesitate to experiment.

Managing Consumer Sentiment

I get a lot of questions about getting consumers to view a brand favorably. If you get people talking, how do you track what they are saying and make sure it is good publicity? Can marketing do that?

Managing consumers’ views of a product and company is one of the most precarious parts of marketing. Nobody likes to be manipulated, especially not by a company they trust. One misstep can hurt your brand image and, in the worst case, it can irreparably damage sales.

Marketers aim to use the above three tactics effectively: identifying users, interacting with them, and encouraging them to discuss your product publicly. When done correctly, consumers get involved in your brand, build loyalty, and spread that love around.

A great example of this is done by Red Bull. A simple Google search shows that there are tons of Red Bull-sponsored sporting events, including professional gaming. They have targeted specific sports and built their brand by supplying fans of these sports with events catered to them. This builds a community around their brand and gets people talk-

ing, and Red Bull responds with their branded Twitter, Facebook, and YouTube pages. They effectively understand the user, build the community, facilitate buzz, manage sentiment and sell product.

A strategy like this takes patience and a constant effort. You cannot rush out there with some swag and a megaphone and expect to be the next trending topic. Red Bull took almost 26 years to get where they are now, and they still have some fierce competition (although they do have a fighter jet and a helicopter).

If you truly understand your users and what they value, you can get them what they want. Be resourceful and utilize your marketing knowledge!

Selling Product

At last, armed with marketing tools and research data, it is time to turn hard work into revenue. I am going to start with what marketing cannot do here, as some common rumors need to be dispelled.

Marketing cannot sell a bad product; a lemon is a lemon no matter the plate it is served on. If your product sucks, marketing can get you some flash-in-the-pan sales, but once word spreads that you have a bad product, sales will dry up.

Additionally, marketing done wrong can really turn people off to buying. If you have spent all of your time building a brand without any reference to your sales, and then you switch it to a sales message, people will get upset. Your customers expect a certain type of interaction with your company, and if suddenly that interaction changes, consumers will get confused.

So how does marketing sell products? The answer is simple. Avinash Kaushik, a thought-leader in marketing strategy and analytics, says he doesn’t consider someone a customer until they buy two products. You have to have a good product and establish trust with the consumer. Nurture your relationship with your customers, especially in the games industry. Games can be very deep and meaningful to people while still being a way to relax and interact with others. Remember that you are selling an experience, something people care about and choose to spend their time on, often at the expense of other forms of relaxation, work, or other obligations.

Conclusion

Marketing is a big subject. Entire fields of study and doctorate degrees have been devoted to it. The sheer number of nuances and gray areas is enough to make anyone’s head spin. However, by understanding your own product needs and goals, you can make the right decision for a campaign. Each strategy will have strengths and weaknesses, and setting expectations around these is the precursor to success. Keep a cool head, adapt to problems, know your audience, and you should be just fine. ✨

Marketers aim to use three tactics effectively: identifying users, interacting with them, and encouraging them to discuss your product publicly. When done correctly, consumers get involved in your brand, build loyalty, and spread that love around.

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Meet Angela

Welcome to the Microconsole Generation

"Angela knows her microconsoles..."

—Zack



Microconsoles (or Android consoles, mini-consoles, unconsole or whatever you choose to call them) come with boatloads of questions. The first is: What are they? And the answer is: The emerging category of things that OUYA, GameStick, GamePop and various others comprise. The next questions might be: Are microconsoles just dressed-up mobile phones? And how can we ever expect them to compete with big-boy consoles—you know, PS4 and so on?

From this and subsequent questions the answers quickly become speculative. They involve a reasonable degree of projection and prophecy, allusion to things past and in the future, the reading of runes and interpretation of entrails. All this speculation follows because we're talking about the future, and the future is always anyone's guess. The future surprises us, regularly (and especially in games), catching us with our pants down. Nobody really saw Facebook gaming coming (and anyone who says they did is lying), and few really comprehended just how big a deal mobile or tablet gaming might be. Few still do.

So, as I approached the lofty task of describing the "micro-console generation" at Casual Connect San Francisco, I determined not to get stuck in the meat-and-potatoes of the numbers or what the gaming media has had to say; it is far too early for either to be useful. Instead I told a story set in 2015-ish, centered on a mid-30s woman named Angela.

The Story of Angela

Angela is nuts for games like *Plants vs. Zombies 3* and *Candy Crush Saga 2*. She

plays games everywhere: on the beach, in the office, on the bus to work and at home. She sometimes finds herself guiltily playing games at one or two in the morning, trying to solve that last puzzle or to get that next piece of digital fruit. She also plays a lot of games, preferring to download them from app stores and play, and then maybe paying for stuff in a few. Every once in a while she finds a really good game and gets hooked.

Why would people like Angela buy underpowered devices capable of doing little more than their tablets or phones? Why on Earth would they buy machines with such simple controllers? Why would games "devolve" in this way?

Yet Angela has a couple of problems.

Her first problem is that she finds some games uncomfortable to play. Some games try to replicate a physical control and her thumbs get in the way. Some cause eyestrain because her phone and tablet are so close to her face. Some leave her hunched over for hours and give her neck strain.

Her second problem is that she doesn't always play games alone. She remembers all the fuss about the Nintendo Wii a few years ago when people played party games, and she wonders what happened to them. Everything seems to happen in small screens these days, and sometimes that just feels a little solitary.

Her third problem is that she wants to try some different kinds of play. She's been playing mobile games

for years, and although they're cool, there's only so many drawing and tapping games she can play before she starts to feel that they're all blurring together. Just like when she used to play lots of Facebook games and they started to feel a bit like Identikit, there's something about her existing gaming that's becoming stale.

Angela's no fool though. She knows that there are other kinds of gaming machines that she could buy into, like the Nintendo DSX or a video game console like the new PlayStation. But there's something about them that just puts her off. They seem monolithic and overcomplicated. They are expensive and they have those awful ugly joypads that seem more effort than they're worth. Getting games for them still involves buying discs (seriously?) rather than downloading.

Most of all, buying into those kinds of machines feels like buying into a cult. She doesn't want that kind of commitment or cost. She just wants gaming that suits her way of life, but is still playable on her television.

That's when Angela hears about microconsoles, a new kind of gaming device that appears to suit her needs. There are a lot of choices, yet they all run the same games so she has no fear that by buying one she'll miss out. They're cheap—usually less than \$100. As with her other preferred gaming devices, the games are all free-to-play. And most of them are small, out of the way—not imposing black boxes of doom. So she buys one. So do 100 million people like her.

This deeply confuses the games industry. *Why, it wonders, would people like Angela buy underpowered devices capable of doing little more than their tablets or phones? Why on Earth would they buy machines with such simple controllers? Why would games "devolve" in this way?*

You Know All of this Already

The answer has a lot to do with true evolution. For you see, there's no rule that says technological evolution and incremental progression are one and the same.

It's an evolution we've seen before. We saw it when the geek world was confused by tablets and couldn't understand why a half-computer/big-iPod was anything anyone would ever want. Then Apple sold 200 million of them. It's the same evolution that drove the world crazy for *FarmVille* (because it was simply free and easily accessible), despite the fact that it was clearly inferior to sim-style games in many ways. Gamers looked on aghast.

It's the same evolutionary story that goes as follows: The future is compact like the Chromecast is compact. The future is neat like iOS7 is neat. The future suits people like Google Instant suits people. The future is shared like media is shared. The future is flexibly priced like virtual goods are flexibly priced. The future is playful like YouTube is playful. You know all of this already, but sometimes applying

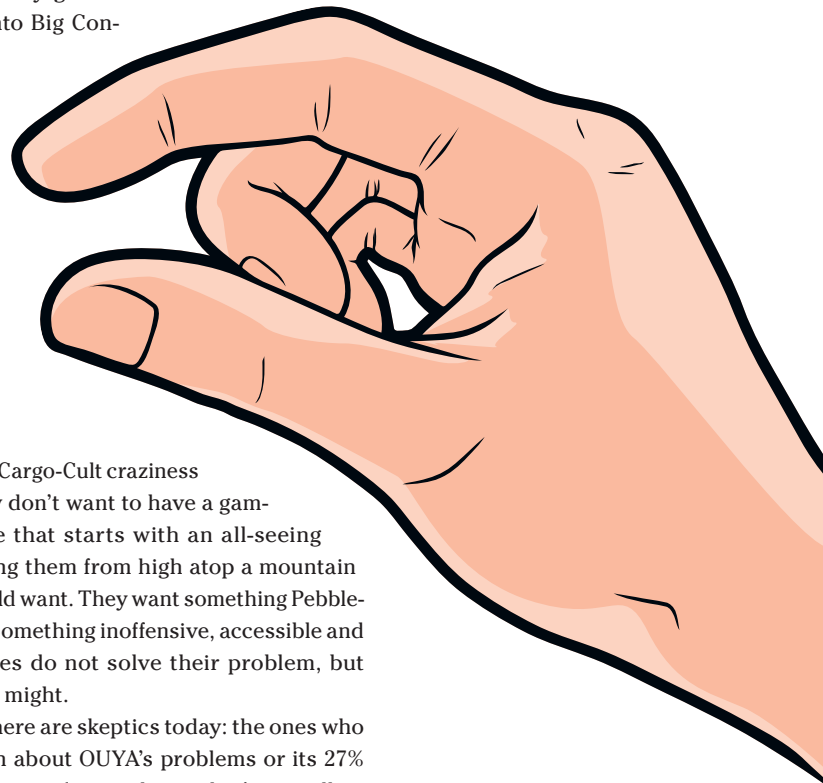
that story to previously untouchable industries like console gaming is hard.

Lots of people like to game. There are at least 250 million of them on Facebook, the same on iPhone: iPad is getting there too, and Android's cooking up a storm. In the eight years it took Sony and Microsoft to acquire 160 million customers between them (many of them likely duplicates), whole new sectors of the industry have risen, comprehensively passing these warhorses. And that's not even considering Asia.

All of the growth is in those new sectors—all of the exciting games and all of the energy. The people driving that crazy growth do not want to buy into Big Con-



by Tadhg Kelly;
Seattle, WA



sole and all the Cargo-Cult craziness attached. They don't want to have a gaming experience that starts with an all-seeing Xbox One telling them from high atop a mountain what they should want. They want something Pebble-sized instead. Something inoffensive, accessible and fun. So consoles do not solve their problem, but microconsoles might.

Of course there are skeptics today: the ones who love to harp on about OUYA's problems or its 27% pay conversion rate (not realizing that's actually a good number). Much of it comes from console cult members who sense the threat and want to draw lines in the sand between "real gamers" and some unspecified others. Many of them commit the fidelity fallacy, as though netbooks, Flip cameras, MP3 players and e-book readers (all of which are supposedly "worse") had just never happened.

Of course there are issues today. Network problems, weak joypads, early development issues and so on abound. I dare anyone reading this piece to create an entire platform from scratch in 15 months and see just how perfect they can make it. Microconsole's are still being figured out, just as the Facebook Platform had its rough-and-ready days before it became what it is today.

In 2013 my story is still fiction—even inconceivable to some. It does not fit some of the mental models that we have for how things are. When do they ever? Yet Angela won't care. She just likes to play games.

Welcome to the microconsole generation. ❄

It's an evolution we've seen before. We saw it when the geek world was confused by tablets and couldn't understand why a half-computer/big-iPod was anything anyone would ever want. Then Apple sold 200 million of them.

Advanced Animation and Effects Using Video Technology

Bring Your Game's Graphics to the Next Level

Video technology isn't anything new. We're

all very accustomed to it, but when it comes to actually using video in our games, there has always been a reason to keep away. Be it codec licensing concerns, performance, platform support or something else, we often convince ourselves that it is not worth the trouble.

But what if I told you that given recent advances in open source codecs and today's hardware capabilities, there's no reason *not* to use videos in your game? Enter the magical world of advanced animation and effects made possible by video technology!

The first and most basic way to use a video in your game is to display a cutscene such as the intro movie. Whetting players' appetites with a cool intro video will make them more interested in your game, thus making them willing to spend more time playing it initially, increasing the likelihood of monetization.

Over the past year or two, we've seen a steady growth in the use of intro sequences in casual adventure and hidden object games, and it seems that this trend is here to stay. Because it is so difficult to captivate and keep players' attention in a world with so many distractions, we at Cateia Games have put a very high focus on intro cutscenes, investing more time and money in making them—even hiring external professionals from the film industry to help us achieve the perfect intro.

Memory, the Eternal Nemesis

Think of all the animations that you had to cut in some way because they were just too big, that no longer has to be a problem. For example, in one of our older adventure games, *Kaptain Brawe*, you could walk the main character around the scene and perform various tasks, and because he was the main character, he had to be displayed in higher resolution and in as many frames as possible.

Even after densely packing the main character's animations into texture atlases, we still ended up with way too much textures.



What if I told you that given recent advances in open source codecs and today's hardware capabilities, there's no reason *not* to use videos in your game?



by Krešimir Špes;
Co-Owner & Lead
Programmer, Cateia Games;
Zagreb, Croatia



Because of memory limitations set by the early iPhones, we had to reduce the animations to eight different directions and about 12 frames each.

The result: many textures being used by just one character! After some thought we decided to pack the frames more densely, which reduced the number of textures from 12 to nine for the main character (and that's just for the walk animation alone!). Even with this improvement, the walk animation required over 50 megabytes of RAM to be displayed—obviously way too much for the original iPhone to handle. In the end we used texture compression to squeeze into the tiny memory limits imposed, grudgingly accepting lower image quality because of it.

Later we developed an example of this animation to decode frames using eight video files (one for each direction)—which only required about six megabytes of RAM and a bit of CPU power. And that's six

megabytes regardless of how many frames the animation has!

His Highness, the Alpha Channel

So, how did we do it? Most video codecs don't support alpha channel out of the box, so we had to think of a clever way to hack it into submission. The method that has proven to be effective is to extract the alpha channel in the source frames and stick it on the right side of the frame. Then, while decoding the video frames, we manually join them back to form one alpha-channel picture that can be used like any other texture in your game.

This concept can be used in many ways. We started using it by displaying animated characters in dialogs which later evolved into doing full lip-sync animation for each voiceover. We simply rendered a talking animated character whose faces were ani-

A scene from Cateia Games' latest title in development, containing several layered alpha channel videos: The hanging snake, water waves, light coming through the trees, the character in the background as well as 3 fires on each of the pillars in the background.



Most video codecs don't support alpha channel, so we 'hack' it by separating it in the video file and joining it while decoding.

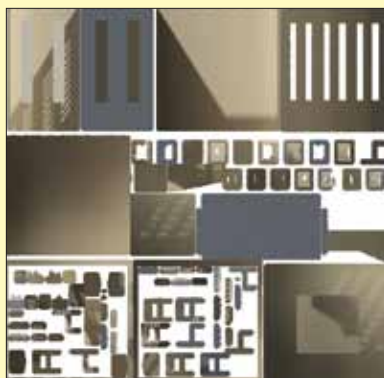
mated by lip-sync software and used those for each dialog line. The files were so small they had a very low impact on the overall size of the game.

Now we use alpha videos just about everywhere, whenever there's something to be animated that can't be done by simple blending, movement or rotation. Some of the best ways we've used it so far is to display underwater reflections as a background layer in one of our upcoming puzzle adventure games, which really brought the scene to life!

The Third Dimension

The application of video technology in games does not have to be limited to a 2D environment. Think of all the 3D surfaces that can be animated, such as a TV picture, clouds, water, fire, projective textures and shadows. If

Never, ever design your scene or game-play to be dependent on videos. No matter how cool it is, you may find yourself facing a platform in the future which either can't support videos or is simply not fast enough to handle them all.



Animated lighting rendered in a video texture, and used on a 3D scene.



you're using shaders to display something, you can use a video to animate your result. For example, instead of using a static normal map on a 3D object, you can animate it, creating different effects, such as simulating wind on clothing, water refractions etc.

You can also use a video for 3D lightning. Instead of calculating complex light, reflection, shadows, etc., you can pre-render the lighting animation and store it in a video file. This approach is limited by texture size, but if used properly, it can improve visuals and reduce computations on the rendering pipeline.

Limitations

The main goal of any video codec is to minimize file size while maximizing picture quality. Obviously, to minimize file size, some picture degradation must occur. Different codecs take very different approaches to compression, but we can summarize them all into two major parts:

1. Image Compression The first thing a codec does is take an image and transform it into a color space similar to the way the human eye perceives color. Because of this, the codec can take advantage of the imperfections in human

vision to remove visual information that the eye won't see, thus reducing file size. Separating the brightness component from color components, each can be degraded individually. Often the color components can be scaled down and degraded more because the human eye notices change in brightness more than change in color.

2. Motion Prediction Video codecs achieve the most compression using motion prediction. In essence, the codec analyzes what has changed from frame to frame and only encodes this information, rather than complete frames. The better the motion prediction, the better compression/quality ratio the codec can achieve.

As a consequence of these two compression techniques, codecs require more processing power to decode a video clip in exchange for keeping a low memory footprint. This is something to keep in mind if you want to use videos in your game, particularly since mobile platforms are becoming more and more popular (and have significantly less processing power than their PC counterparts).

Before doing any video animation in your game, please heed the following warning: Never, ever design your scene or game-play to be dependent on videos. No matter how cool it is, you may find yourself facing a platform in the future which either can't support videos or is simply not fast enough to handle them all. If your game can work without videos as well as with them, then you have nothing to worry about. Otherwise, you might consider some of the following backup solutions:

- Lowering the resolution of your videos on slower platforms
- Using fewer frames packed in one or more textures
- Using a static image

The Small Print

As with everything in life, there's no such thing as a free lunch. There are certain things you need to consider when using video technology in your games.

» **Processing** | Keep in mind that this approach involves some extra processing time. And plan accordingly.

» **Quality Degradation** | You must be careful with the quality setting while encoding the video file. Since video codecs degrade the picture, if you use a low quality setting, chances are the alpha channel will be affected by it as well, which can lead to visual artifacts.

» **Overdoing It** | When doing alpha video animation, it's important to keep a cool head. You may be tempted to make hundreds of layered alpha videos on a scene only to find that your game runs like a turtle on ice! Always keep in mind that video decoding takes a toll on your platform's processing power. The more videos you have and the bigger they are, the more processing you'll need. Whenever possible, animate by simpler methods such as blending, movement or rotation.

» **Codec Licensing** | Most codecs today require a paid license to be used in a commercial product, but they usually promise good performance for the buck. There are some great free and open source alternatives that are definitely worth taking into consideration. Theora and WebM are the best examples of this group. Usually they're slower than their paid counterparts, but free is free.

On some platforms, you can use the native codec and avoid paying licensing fees while enjoying the full benefits it provides. For example, on iOS, you can access the na-

tive H.264 decoder to decode video super fast while Apple takes care of licensing.

» Hardware Decoding |

Videos can be decoded by either the CPU or dedicated hardware. Dedicated hardware can decode video several times faster than the CPU, but it isn't necessarily available on all platforms.

Also, you have to be aware of the limitations this hardware imposes. For example, on iOS, only one video can be decoded by the hardware decoder at any given time. If you have multiple videos in your scene, the rest of them will be decoded in the slower, CPU mode.

» **Decoding Time** | Because of motion prediction features of a video codec, it can take more or less time to decode any given frame. The more motion that occurs between frames, the longer it takes to decode.

This can be a problem for video playback. You can't just decode a new frame when the old one expires and expect smooth playback. A better solution would be decoding frames in advance and storing them until they are needed. This is called frame pre-caching, and in our experience you usually need to pre-cache four-to-eight frames.

If you're using shaders to display something, you can use a video to animate your result.

Our Solution

We've developed our own solution for handling all of the above and released it under an open source license. It's called the "Theora Playback Library" and can be found at the following web address: <http://libtheoraplayer.cateia.com>. There's lots of technical documentation available there as well as example code. I'd recommend at least downloading the example programs to see for yourself what can be achieved with it.

This solution is written in C++ and is based on the Theora open source codec. Additionally, the library can use the native decoder on iOS and optimized color space conversion on most platforms. Supported platforms include Windows, Mac, Linux, iOS, Android, Windows RT and Windows Phone. Support for other platforms can be easily expanded. ❖



"No more excuses, I'm going to star in the next intro video!"

—Angela

The Happy Marriage of Art and Science

The Curious Case of Robots & Pencils

Robots & Pencils is an app and game developer that strives to merge the sciences and the humanities to produce products that have a solid technological foundation and visual appeal (hence the name). The company even goes so far as to refer to its artists as “Pencils” and its programmers as “Robots.” It released its first app, *Crushfactor*, in 2008 and has since released a number of top-selling apps and games, including the bestselling real-estate app, *Rightmove*, the History Channel’s *Hidden Cities*, *Catch the Princess*, and *World Explorer*—an app that allows people to explore Minecraft on their tablets. The company newest game is based on one of *MAD Magazine*’s most popular staples, *Spy vs. Spy*. The Casual Games Association recently interviewed Paul

Thorsteinson, who has served as Chief Technology Officer since 2010, to find out more about Robots & Pencils.

Beginnings

Founded in 2008 by Michael and Camille Sikorsky, Robots & Pencils started off as another app developer that was created as the iPhone’s popularity skyrocketed. Thorsteinson describes its first app, *Crushfactor*, as “a great excuse to touch someone and the easiest way to get their digits.” *Crushfactor* presents a series of relationship-related questions to be answered by the owner of the iPhone and a person they find attractive. “If the App Store was a lake, then *Crushfactor* would be our foot,” says Thor-





Robots & Pencils;
Calgary, Canada



steinson. "We tried the water and we liked the temperature, so we jumped in for a swim!" At the same time, Thorsteinson admits that while *Crushfactor* was "a pretty fun and quickie app, it doesn't take an accountant to figure out that it isn't making anyone rich."

Though *Crushfactor* didn't make Robots & Pencils enough money to allow everyone to retire to a tropical paradise, analytics baked into the app did allow the newly developed company to better understand which aspects of the app users liked and disliked. Their experience with *Crushfactor* also allowed the team to experiment with a variety of marketing campaigns to figure out which ones worked best. This in depth understanding of how to find their audience and what their audience wanted in a product allowed this young company to develop its industry niche. "At Robots & Pencils we make games," says Thorsteinson, "but we also spend the majority of our time making all sorts apps for other people." This approach has allowed this developer to thrive by learning how to blur the lines between business apps and games. "In the end we tend to 'gamify' many of the apps that are not games because we want people to have fun while they are using our apps to do a task."

Robots & Pencils has not taken its success for granted. Early on, the owners realized that they wanted their company to have a charitable component, which is why they have donated 10% of the proceeds from *Crushfactor* to helping Ethiopian children. "We feel that we have been extremely lucky to be involved with such a tremendous period of technological innovation," says Thorsteinson, "especially when there are so many people in the world who do not have access to this. Engaging charities

is a way that we felt would best express our gratitude as a team." Moreover, as Robots & Pencils has grown, there are now plans to go out into the community and help teach kids how to make and market apps.

Building on Success

Since the success of *Crushfactor*, Robots & Pencils has made apps for general users and apps for specific industries. For example, *Rightmove* was created to help users better find real estate. However, the company has also created apps specifically for companies like Deco, Marmot Concrete, Westjet Fun 'N' Festival, and others. In the case of Deco, which specializes in window repair, Robots & Pencils developed an app that allowed the company to move their operations to the iPad. In other cases, the company was able to create software that allowed their clients to streamline their digital business practices.

Recognizing that many programmers and designers set out to make games but then get sidetracked along the way, Robots & Pencils was determined to continue building games as well as apps. "We don't like to pigeonhole our creativity," says Thorsteinson. Lest there be any doubt about that commitment, consider that the team pumped out three new games in 2011 alone: *World Explorer*, *Hidden Cities*, and *Catch the Princess*.

World Explorer was inspired by the desire to explore the world of *MineCraft* away from a console or

"In the end we tend to 'gamify' many of the apps that are not games because we want people to have fun while they are using our apps to do a task."



PC. “We wanted to be able to continue building our worlds outside of the confines of our desk. Again it was partially to satisfy our own needs and we also felt that other people would feel the same. So we built it as a way for people to be able to take *Minecraft* with them wherever they went.”

Another example of how the interests of those at Robots & Pencils have influenced the company is the game *Hidden Cities*, which is based on the History Channel show. “Because we have a strong number of History Channel fans in the office,” says Thorsteinson, “we flew to Singapore to meet with them to discuss what kind of things we could do in the mobile space that could leverage their show.” To develop the game to the History Channel’s liking, Robots & Pencils worked closely with the team at the History Channel to ensure that matched the feel of the game with the feel of the show. “The trick to making it both entertaining and informative was to take the information from the show, and then leverage it with the experience we have making games.”

Going Mad

The most recent game to be produced by Robots & Pencils is also based on a preexisting property. However, unlike *World Explorer* and *Hidden Cities*, which are based on properties that are only a few years old, their most recent game is based on a property that goes back to the 1960s—*Mad Magazine*’s “Spy vs. Spy.” While “Spy vs. Spy” has experienced a recent resurgence in popularity because of its presence in a cartoon on the Cartoon Network, there was also a video game was based on the comic strip published by First Star Software in 1984. Thorsteinson had fond memories of the game from his youth, so periodically he would check the App Store to see if an updated version had been released. Finally, he got tired of waiting and took matters into his own hands.

Thorsteinson reached out to Richard Spitalny, the founder of First Star, to see if the rights to the game might be available. Spitalny connected Robots & Pencils with Warner Bros./DC Comics (who hold the rights to “Spy vs. Spy”), and before long they were all collaborating on a remake of the game for mobile devices. Considering that *Spy vs. Spy* was, as Thorsteinson puts it, “spawned out of us just wanting to play it on our iPhones but not being able to,” the success has been remarkable. *Spy vs. Spy* has become Robots & Pencils’ bestseller in 11 countries.

Lessons Learned

Not surprisingly, the team has learned a lot of lessons since it first opens its doors in 2008. Says Thorsteinson: “One insight we have learned that eludes many people is that it’s a bit of a fairy tale that you can make an app, release it without any marketing, and then watch it rain cash. In the early days of the

App Store there were a few apps like the fart app that did really well and got lots of people excited. But at the end of the day there are now well over 700,000 apps in the store, so you really need to be very thoughtful about every step of your app life-cycle, from inception to updates.”

Thorsteinson also observes that iOS has gained increasing acceptance in the enterprise space—a big shift from when they started out. On the flip side, he also sees a growing that the App Store is no longer the center of the universe that it once was. “When we first started, we worked almost exclusively on apps that were destined for the App Store,” he says. “Now we are seeing a shift in that the majority of apps we write now are being deployed within orga-

Recognizing that many programmers and designers set out to make games but then get sidetracked along the way, Robots & Pencils was determined to continue building games as well as apps.

***Spy vs. Spy* was “spawned out of us just wanting to play it on our iPhones but not being able to.”**

nizations and outside of the App Store. That has made it more viable to be a mobile shop because you can mix stable gigs with the more risky ventures like a game bound for the App Store.”

Looking Forward

Although he acknowledges that Robots & Pencils has a 100-year plan, Thorsteinson is unwilling to share many of the specifics. “At our core we are a mobile shop, but with the flexibility of our toolsets these days we definitely have been dabbling in the viability of releasing on other platforms.” The he adds this: “The shifting sands of cross-platform development will start to settle more than they have in the past and yield more consistent options for cross-platform work.” What that might mean for Robots & Pencils is anyone’s guess. But this much is certain: Whatever they choose to do, it will include a healthy mix of both art and science. ✨



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3D Animation for Everyone Else

Autodesk Brings Maya to the Indie and Mobile Markets

We asked Frank Delise, Director of Autodesk Game Solutions, to tell us about Maya LT, Autodesk's latest 3D modeling and animation tool for mobile and indie game developers.

In the past, smaller developers had to rely on pirated or non-stable software because nothing existed that met their design or financial needs. We believe that because we are offering a legitimate product, more developers will feel free to experiment and create.

What prompted Autodesk to develop a 3D animation and modeling tool specifically for indie and mobile game developers?

While we still see some great AAA titles, in the past few years we have also seen an explosion in high quality mobile and casual games from smaller studios. These studios have very different production needs than their console and PC counterparts, primarily due to shorter development cycles, a more dispersed workforce and, most importantly, varying budgets. We didn't see a tool on the market that addressed the need for an affordable yet production-proven tool, which is the role we see for Maya LT.

We also wanted to launch a tool for the indie, student, or freelance developer who may not have the backing of a studio, large or small. The flexibility of Maya LT gives these developers a legitimate, professional grade tool.

Maya LT includes the most essential 3D modeling and animation features. In the past, smaller developers had to rely on pirated or non-stable software because nothing existed that met their design or financial needs. Maya LT is a stable product that has the full support of the Autodesk community. We believe that because we are offering a legitimate product, more developers will feel free to experiment and create.

What kind of game assets will developers be able to create with the software?

Maya LT supports the creation of 3D characters, props and environments. It can also be used in the creation of assets for 2D games by using the Play-Blast feature to help make sprite sheets.

Does Maya LT support standard game engines, and if so, which engines does it support?

We did not lock Maya LT to a specific engine because we wanted to give developers the ability to choose whichever engine they prefer. That being said, Maya LT exports files in the FBX data exchange format, which is supported out-of-the box by Unity 3D Engine, Unreal Engine, and CryEngine. There is also an SDK available for FBX which allows developers to adapt other environments to the FBX format.

How do you see Maya LT fitting into existing indie and mobile game development pipelines?

As an asset-creation tool, Maya LT can be an integral part of the development process, from original content creation to reviews and edits. For asset reviews in particular, Maya LT uses Viewport 2.0, which supports Microsoft DirectX 11 and ShaderFX. Both of these technologies help make the Maya LT viewport display assets much more closely aligned with how they will look in-game, which is significant in reducing the turnaround time for artistic iteration. Since Maya LT supports the flexible FBX format, it is fairly easy to fit into the workflows of indie and mobile developers.

What new opportunities do you think the software will bring to this community?

The lower cost gives indie developers a low barrier-to-entry to use higher quality software that doesn't put them over budget. Artists will now be able to easily create better art using industry standard tools.



Frank Delise;
Director of Game
Solutions, Autodesk;
San Francisco, CA

We did not lock Maya LT to a specific engine because we wanted to give developers the ability to choose whichever engine they prefer.

With the re-designed workflow and affordability, young artists can look to Maya LT as a starting block into the 3D industry. Since it is still based on Autodesk Maya, there is a reduced learning curve when moving between the software packages, leaving the door open to opportunities in AAA gaming or non-gaming industries.

How is Maya LT different from the existing version of Autodesk Maya?

Autodesk Maya is a powerful tool used by a variety of entertainment industries and has the toolset to meet and exceed all those needs. We simplified the Maya LT feature set to make the most relevant game development tools easy to find and use. While Maya LT does borrow features and UI from Maya, we also wanted to make it easier to use the tool to attract new users, which resulted in a refined and targeted workflow.

Maya LT has a robust modeling toolset, but it does not include dynamics or simulation features, which are most often used for visual effects. These features are mainly used in the film and television industry, but seldom with mobile and indie games. Maya LT does not support rendering, but it does allow for animated sprite sheet creation and high quality pre-export previews directly in the viewport. Plus it's compatible with a variety of game engines.

Can users expect to see the same caliber content with Maya LT that they'd see with the traditional version of Maya?

In the indie market we noticed a concern about the efficiency of the content being used in-game. Artists frequently create higher resolution versions of their 3D assets from which they can calculate a variety of details that can be transposed onto much lower resolution versions of those same assets. With Maya

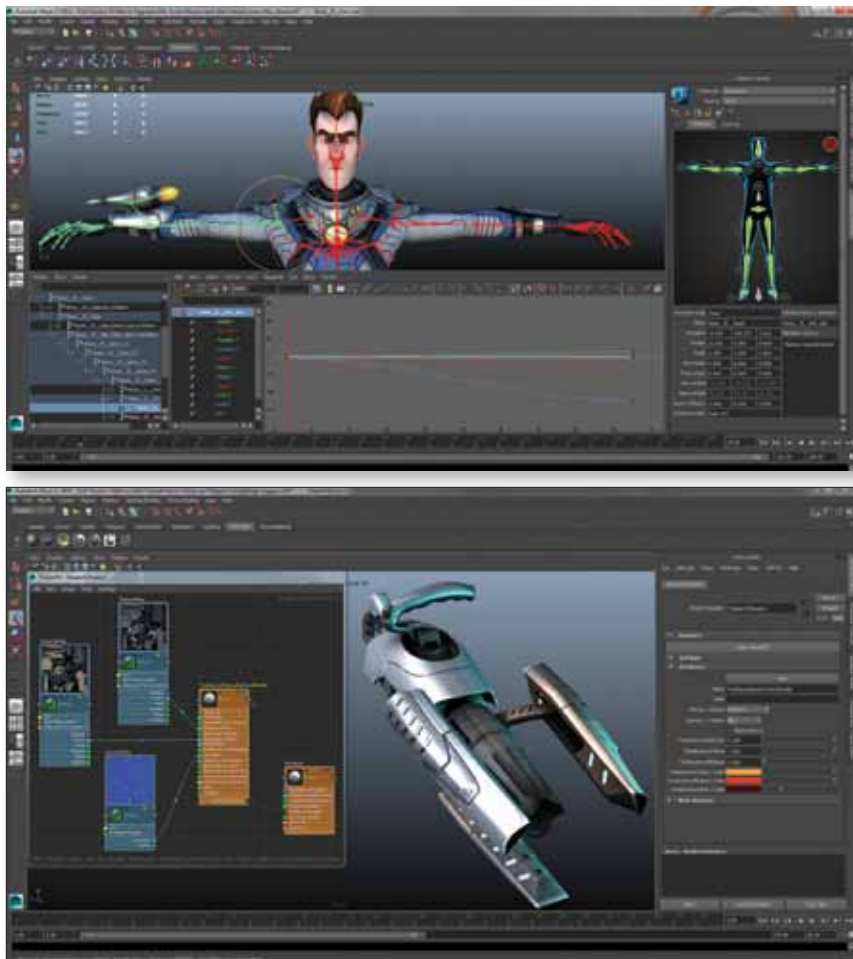
LT, artists can create high resolution assets in the MLT format. At the time of export for game engines, users can export assets up to 25,000 polygons in the FBX format. This means that the final version of the asset can still appear to be of relatively high quality while meeting the efficiency needs of mobile platforms. We wouldn't expect artists in this market segment to need the same level of assets used in blockbuster films or AAA games, which are needs Maya already addresses.

KEY FEATURES OF MAYA LT

We designed Maya LT from the ground up for the indie and mobile game developer, making very conscious decisions about how to make it useful to the community. Everything—from the UI and workflow to the particular feature set—went through extensive focus testing. Autodesk Maya is used predominantly in the entertainment industry, and we wanted to exploit that user familiarity to our advantage in Maya LT, which has an edited Maya UI and workflow, but with very specific 3D modeling and animation tools.

Maya LT enables artists to model with full parity of Maya, including the powerful NEX toolset. We included the essential animation features like keyframing and simplified rigging tools through the Autodesk HumanIK rig and skeleton generation to make it easier for these artists. Maya LT offers efficient model material creation and the Turtle tool for texture baking and simulating realistic lighting. We're excited about ShaderFX, a node-based shader editor, which allows shaders to be created without manual coding and offers portability between Maya LT and the game engine. Maya LT also includes Viewport 2.0, supporting DirectX 11. Combined with ShaderFX, this helps make the asset creation environment much more representative of the in-game look-and-feel, helping to speed up the artistic iteration time.

The software integrates seamlessly into most game development workflows with day-one support for Unity 3D Engine and Unreal Engine through the FBX file format for primary data exchange. Developers can also import a number of 3D asset formats, including Maya (.ma, .mb), Maya LT (.mlt), OBJ, FBX, AI, and EPS, along with texture formats (BMP, PNG, DDS, EXR, TGA, TIFF). In addition, developers can export 3D assets in FBX and .mlt.



While Maya LT does borrow features and UI from Maya, we also wanted to make it easier to use the tool to attract new users, which resulted in a refined and targeted workflow.

Is the software easy to learn? Does it require experience using pro 3D animation and modeling tools?

Maya users will feel instantly at home with Maya LT, as Maya LT shares a similar look-and-feel. However, we did not want to limit the appeal of the product just to those who are familiar with Maya, which is why we spent so much time improving and polishing the final UI, workflow and feature set. We made sure to highlight the most relevant tools while minimizing the number of features that would be more at home in the film or television industry.

Autodesk has a history of community support, with tutorials and AREA, a community forum for 2D and 3D artists, complete with showcases, downloads, events and contests. We are creating a separate community for Maya LT users where they can interact

with each other, help troubleshoot problems, or just share their creations. Like all Autodesk products, Maya LT users will have access to Autodesk-created training videos, documentation and technical or consulting services.

Maya has been used in the creation of popular movies (*The Girl with the Dragon Tattoo*, *Hugo*, and *Rango*) and television shows (*Game of Thrones*, *The Walking Dead*, and *Once Upon a Time*). Will Maya LT allow social and mobile game developers to have similar cinematic graphics?

While our tools have traditionally been used in the Film, TV, and AAA games spaces, there is no doubt that the needs of those customers differ drastically from the needs of this new segment. With film and TV content, the final rendering phase can be done offline on huge server farms. In games, rendering happens in real-time in the game engine and is limited by many factors, including the hardware powering the device. Developers considering mobile platforms or web-based games typically don't need to have the level of detail we associate with blockbuster feature films, and they can even be disadvantaged by content that cannot be created fast enough to offer a playable frame rate.

What Maya LT offers is the ability to create higher resolution assets from which artists can derive a certain level of detail that can be transposed to lower resolution assets. This helps mimic a higher quality look-and-feel without decimating performance. Finding the perfect balancing point is up to each developer, but having tools that help make artistic content more efficient is a significant priority.

With mobile devices increasing in processing power and graphics, is there a long-term need to have Maya LT?

It's true that in the past few years, we've seen an increase in processing power and graphics in mobile devices. But the nature of mobile gaming is still vastly different than what people expect from console or PC games. The debate about "console quality" games on mobile phones is focusing on the wrong issues; instead of asking about *graphics* quality on a mobile device, we should be asking about mobile quality *game-play*. Gamers across platforms enjoy beautiful games, but they will stay engaged with interesting and fresh concepts—something we think Maya LT can help with. The mobile market is fiercely competitive and developers need tools that will withstand the demanding production cycle while still delivering high quality assets. Our goal is to have Maya LT developers not worry about the fidelity of their assets so they can focus on creating unique experiences. ❄



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Now We Are Talking

The Making of *VEGA Conflict*

George Fidler is currently the General Manager of KIXEYE Australia. With over two decades of experience in the gaming industry, Fidler has worked for Electronic Arts, The Creative Assembly, 3 Blokes Studios, and RockYou Studios before joining KIXEYE. At KIXEYE he has overseen the creation, development, and support of *VEGA Conflict*. *VEGA Conflict* is a real-time strategy (RTS) game that allows you to build a fleet of customizable spaceships to mine for minerals and wage war against competitors.

In a recent interview, Fidler described the initial inspiration for *VEGA Conflict*, difficulties encountered when making it, signs of its success, long-term goals for the game, and some lessons KIXEYE learned from *Vega Conflict's* development.



George Fidler, General Manager,
KIXEYE Australia; Brisbane, Australia



KIXEYE Team



What was the initial inspiration for VEGA Conflict? Specifically, how did the story and the game-play for VEGA Conflict develop?

We are all big sci-fi fans, so when the opportunity to develop a space-based RTS game came up, we weren't short on ideas. The game-play shares a heritage with KIXEYE's other games, but one of the greatest strengths of a space setting was that we were able to use mechanics and ideas that would have been impossible with the previous games.

VEGA Conflict is not just about space battles; it's about managing one's resources. What was the reason for making resource management so important to the game?

Resource management is a critical part of any strategy game. The space battles are the tactical layer of the game in which players get to try out their new toys, but without resource management it would be a very shallow experience, with everyone just picking the best ships, weapons and equipment every time.

A part of VEGA Conflict's story involves mining in space. Did you turn to real-world studies on mining and minerals that could be found in space to inform the game?

In fact we did—even though there isn't necessarily a direct correlation with real-world resources, we did spend a lot of time looking through our geology books for just the right mix of resource types. We wanted a list of resources close enough to real-world resources that players would understand how they behaved, yet with enough of a sci-fi twist to make them feel exotic.

What sort of goals informed the design of the visuals for VEGA Conflict?

We really wanted to create a unique visual identity for VEGA Conflict. So while we were looking at other media for inspiration, the art team had to create a visual language that looked fresh and new. This is evident in our ship and base designs as well as the treatment of the sector and planetary maps.

Given the number of movies, comic books, novels, and video games set in space, how did you go about creating unique looking starships? Were there any stories that significantly inspired the creative team?

Our goal with our ship designs was always to create a sense of scale—a challenge for any Flash-based game. We looked at a wide range of influences, from other games to the great space opera movies and even the work of sci-fi artists of the '70s and >

VEGA Conflict

> '80s. We did spend a lot of time looking at *Battlestar Galactica*, as we felt the scale of the Battlestar was similar to what we were going for with our bigger hulls.

Prior to VEGA Conflict, KIXEYE had created several games, including Backyard Monsters, Battle Pirates, War Commander, and Desktop Defender. What has KIXEYE learned about game development that helped shape this game?

The founders of KIXEYE have certainly defined an amazingly successful formula for creating free-to-play, massively multiplayer, real-time strategy games. Our games monetize up to 20 times higher (ARPDau) than other popular social games, and our players are more engaged, playing more than two sessions per day, and one hour and 30 minutes in total per day. We have built on this learning and taken the combat strategy genre to the next level.

Like many games, VEGA Conflict allows players to use real-world currency to purchase new items. How do you go about setting prices?

We use our existing games as a baseline and then, despite being located on the other side of the world, we work closely with the other game teams to help price our items correctly. This isn't KIXEYE's first game, so we can easily draw on their experiences and learn from them.

What were KIXEYE's goals for this game?

When we began development on *VEGA Conflict*, we knew that if we could provide a quality experience, the players would be engaged. So first and foremost, it was about making the best game possible. The programming team also set out to develop a server-based architecture instead of a client-side architecture. This means much of the game-play is actually running on remote servers, which improves both stability and security.



Were there any technological limitations developers had to deal with when building VEGA Conflict?

We knew when we set out to make *VEGA Conflict* that we wanted to push the boundaries as to what was expected from a Flash game graphically. The initial pitch we developed described a space opera featuring epic space battles—which meant visually-detailed environments and a large number of projectiles. Initially, this proved difficult using the standard Flash rendering pipeline. So we developed a graphics engine based on Stage3D, which meant we were able to attain the desired visual fidelity with room to play.

How did KIXEYE approach marketing this game?

We launched *VEGA Conflict* in closed beta a couple months prior to opening it up to the full public. That period allowed us to test several new features, and see what was working or not and to fine tune the best possible game-play experience for our fans. The majority of our players are male, passionate gamers, ultra-competitive, and they love having unlimited strategic options to customize their weapons and bases. That said, we've been able master the science of finding these specific types of users, and as we continue to add more content to the game, we'll ramp up user acquisition, PR, in-game events, etc. Stay tuned. ✨



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